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**National Highway
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Indiana University
[REDACTED]

ON-SITE AIR BAG INVESTIGATION

CASE NO. - 95-17
FLEET - LEASED VEHICLE
LOCATION - [REDACTED] TEXAS
ACCIDENT DATE [REDACTED] 1995

Submitted By:

[REDACTED]
Senior Staff Associate
and
[REDACTED]
Associate Scientist

[REDACTED] 1995

Contract Number: DTNH22-94-D-17058

Prepared for:

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Washington, D.C. 20590

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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15. Supplementary Notes On-site air bag deployment investigation involving a 1994 Acura Vigor GS, 4-door sedan, with active belts and dual front air bags			
16. Abstract <p>This report covers an on-site investigation of an air bag deployment crash that involved a 1994 Acura Vigor GS and a 1985 Ford LTD. The Vigor was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane). The LTD was traveling south in the southbound lane of a two-lane, undivided city roadway. The front of the Vigor (case vehicle) impacted the left front and passenger sections of the LTD (vehicle #2) causing the case vehicle's driver side and right-front passenger side supplemental restraints (air bags) to deploy. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast. The case vehicle's driver (46 year-old female) was also restrained by her available, active, three-point, lap and shoulder belt and sustained, according to her interview, minor injuries which included: small burns to her forearms and a cervical strain. The right front passenger in the case vehicle (27 year-old female) was not wearing her available, active, three-point, lap and shoulder belt and sustained, according to the case vehicle driver (and mother), minor injuries which included: a forehead abrasion and a laceration to a left finger. The right rear passenger in the case vehicle (78 year-old female) was also not wearing her available, active, three-point, lap and shoulder belt and sustained, according to the case vehicle driver, a minor injury to her right lower leg. Vehicle #2's driver (17 year-old female) was restrained by her available, active, three-point, lap and shoulder belt and sustained, according to her interview, a minor abrasion to her left thigh.</p>			
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TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-17

FLEET - LEASED VEHICLE
LOCATION - [REDACTED], TEXAS

SUMMARY

This report concerns a motor vehicle crash involving an air bag equipped 1994 Acura Vigor GS, four-door sedan, and a 1985 Ford LTD, four-door sedan occurring on [REDACTED], 1995 at [REDACTED] p.m., in [REDACTED] Texas on a U.S. highway. This crash is of special interest because the case vehicle's right front passenger air bag was torn during its deployment.

The Vigor was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane) when it impacted the LTD which was traveling south in the southbound lane of a two-lane, undivided city roadway. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast.

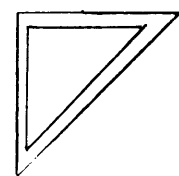
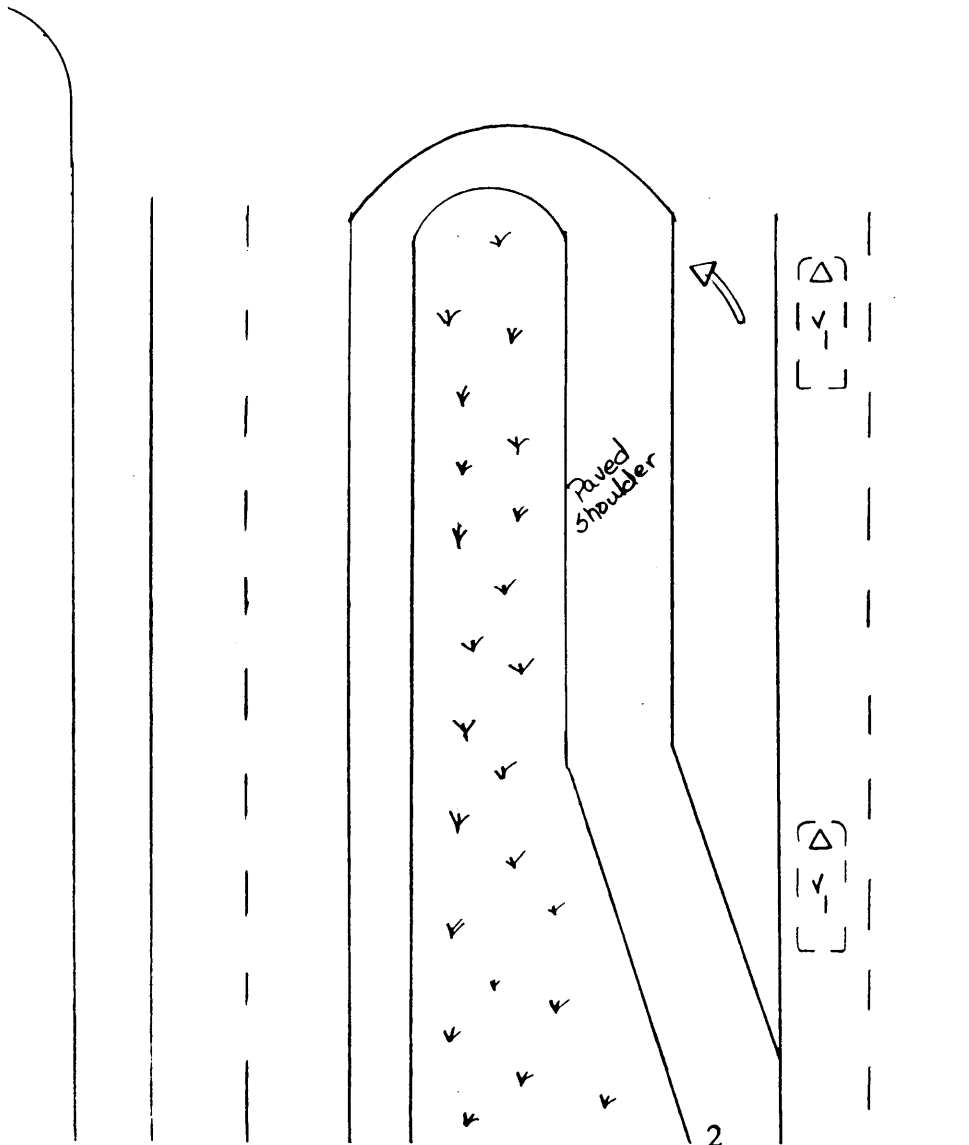
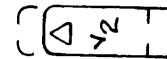
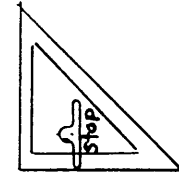
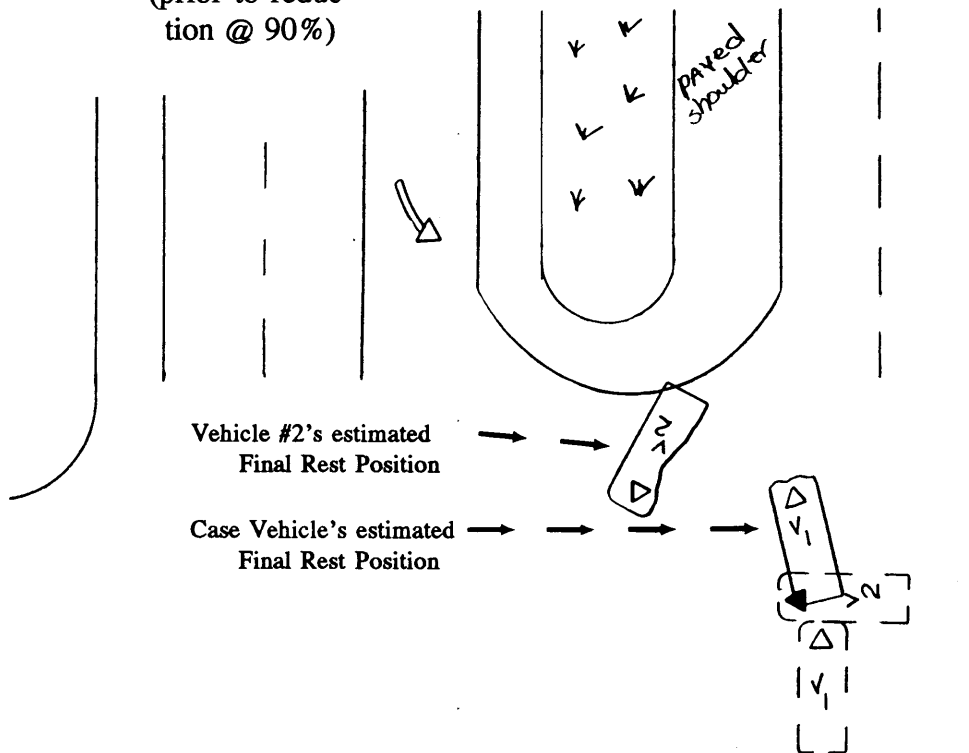
The front of the Vigor impacted the left front and passenger sections of the LTD. CDCs were determined to be: 01-FDEW-1 for the Vigor and 10-LYEW-3 for the LTD. The CRASHPC reconstruction program, damage only algorithm, was used on the impact (highest severity) to the Vigor. The Total, Longitudinal, and Lateral Delta Vs are respectively: 24 k.p.h. (15 m.p.h.), -22 k.p.h. (-14 m.p.h.), and -8 k.p.h. (-5 m.p.h.).

The 1994 Acura Vigor GS was equipped with both driver and right-front passenger supplemental restraint systems (air bags) which deployed as a result of the frontal impact. The driver of the vehicle (46 year-old female) was also restrained by her available, active, three-point, lap and shoulder belt. She sustained, according to her interview, minor injuries which included: small burns to her forearms and a cervical strain. The driver of the Vigor was listed on the Police Accident Report as not sustaining any injury as a result of this crash. The right front passenger (27 year-old female) in the Vigor was not wearing her available, active, three-point, lap and shoulder belt, sustaining a "B" (nonincapacitating-evident) injury. She sustained, according to the case vehicle driver (and mother), minor injuries which included: a forehead abrasion and a laceration to a left finger. The right rear passenger (78 year-old female) in the Vigor was also not wearing her available, active, three-point, lap and shoulder belt and was listed on the Police Accident Report as not sustaining any injury as a result of this crash. According to the case vehicle driver, she sustained a minor injury to her right lower leg. The driver (17 year-old female) of the LTD was restrained by her available, active, three-point, lap and shoulder belt and was listed on the Police Accident Report as not sustaining any injury as a result of this crash. According to her interview, she sustained a minor abrasion to her left thigh.

Scale: 1 cm = 2.5 m
(prior to reduction @ 90%)

CRASH SCHEMATIC

TRC/IU CASE NO. 95-17



Turning noncontact truck blocks Vehicle #2's line-of-sight



Road Surface: Asphalt
Road Condition: Dry
Curvature: Straight
Slope, pre-impact = Level
(i.e., < 2%; actual slope is -0.5%)
Slope, between impact and final rest = Level
(i.e., < 2%; actual slope is -0.5%)

TRC/IU ON-SITE AIR BAG INVESTIGATION

TRC/IU CASE NO. 95-17

FLEET - LEASED VEHICLE
LOCATION [REDACTED] TEXAS

ACCIDENT DATA

Location/Street: U.S. Highway
City/Township: [REDACTED] County, [REDACTED], Texas
Area/Type: Urban, commercial
Accident Date/Time: [REDACTED] 1995, @ [REDACTED] p.m.
Investigating Police Agency: [REDACTED] Police Department
Accident Type: Car / Car - right angle
Occupant Injury Severity
(air bag vehicle): Abrasion forehead (AIS-1)

AMBIENT CONDITIONS

Light Conditions: Daylight
Weather Condition: Clear (no clouds)
Precipitation: None
Road Surface: Dry

ROADWAY

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Location:	U.S. highway	City street
Number of Travel Lanes:	Five lanes, divided; two lanes eastbound, three lanes westbound--two westbound through lanes and one left-turn lane	Two lanes, undivided
Width:	3.4 meters (11.2 feet)	5.7 meters (18.7 feet)
Surface Type:	Asphalt	Asphalt
Median:	Grass median without positive barrier	None

ROADWAY (CONTINUED)

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Shoulders:	Asphalt shoulders on both north and south sides of westbound roadway	Concrete apron with curbs on north and south sides
Vertical alignment:	Level	Level
Horizontal alignment:	Straight	Straight
Estimated Coefficient of Friction:	.75	.75
Traffic Density:	Moderate	Light

TRAFFIC CONTROLS

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Signals:	None	None
Signs:	None	Regulatory STOP sign
Markings:	Solid white edge line on north side, dash white lane line between outside and inside through lanes, double solid white lane lines between inside through lane and left-turn lane, and solid yellow center line on south side	Dashed white lane line between north and south lanes until near intersection; at intersection, double solid yellow center lines
Speed Limit:	64 k.p.h. (40 m.p.h.)	48 k.p.h. (30 m.p.h.)

VEHICLES

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Year:	1994	1985
Make:	Acura	Ford
Model:	Vigor GS	LTD
Body Type:	Four-door sedan; five passengers	Four-door sedan; five passengers
V.I.N.	JH4CC2664RC-----	1FABP393XFG-----
Color:	Black	Gray

VEHICLES (CONTINUED)

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Mileage:	22,925 km (14,245 miles)	Unknown, odometer may have rolled over; 52,943 km (32,897 miles)
Engine:	2.5 liters, I5	3.8 liters, V6
Transmission:	4-speed automatic	Automatic, unknown speed
Steering:	Power-assisted, rack-and-pinion	Power-assisted, worm and gear
Brakes:	Power-assisted, 4-wheel disc	Power-assisted, 4-wheel drum
Padding:	Steering wheel and hub, sunvisors, dash, "A"-pillars, side door surfaces	Steering wheel, dash, sunvisors, A"-pillars, side door surfaces
Active Restraints:	3-point, manual, lap and shoulder belts in front and rear outboard seating positions; lap belt only at rear center position	3-point, manual, lap and shoulder belts in front outboard seating positions; lap belt only at rear positions
Passive Restraints:	Factory installed driver and right front passenger supplemental restraint systems (air bags)	None
Defects:	None	None
Fleet:	Leased vehicle	Private vehicle
Tow status:	Towed due to damage	Towed due to damage

VEHICLE DAMAGE

<u>EXTERIOR</u>	<u>Case Vehicle</u>	<u>Vehicle #2</u>
<u>Deployment Impact</u>		
Event number:	First	First
Object Struck:	Vehicle #2	Case Vehicle
Damage location		
Damaged Plane:	Front	Left
Vertical Location		
On Plane:	Bumper	Between sill and beltline

VEHICLE DAMAGE (CONTINUED)

EXTERIOR (Continued)Case VehicleVehicle #2Deployment Impact (Continued)

Direct Begins:	9 cm (3.5 in) inward from left front bumper corner	17 cm (6.7 in) behind left front axle
Length Direct:	140 cm (55.1 in)	215 cm (84.6 in)
Field L:	162 cm (63.8 in)	252 cm (99.2 in)
C ₁ :	26 cm (10.2 in)	0 cm (0.0 in)
C ₂ :	18 cm (7.1 in)	10 cm (3.9 in)
C ₃ :	17 cm (6.7 in)	35 cm (13.8 in)
C ₄ :	13 cm (5.1 in)	36 cm (14.2 in)
C ₅ :	11 cm (4.3 in)	19 cm (7.5 in)
C ₆ :	9 cm (3.5 in)	0 cm (0.0 in)
D:	+7 cm (+2.8 in)	+6 cm (+2.4 in)
Maximum Crush:	26 cm (10.2 in)	36 cm (14.2 in)
Location:		
CDC:	C ₁	C ₄
Damaged Components:	01-FDEW-1	10-LYEW-3
	Front bumper, grille, hood, left and right front fenders and headlight assemblies	Left front fender, wheel rim, and door, left rear door, and left front headlight reflectors and turn signal

INTERIOR

Damaged Components:	Windshield, holed	None
Other Evidence of Occupant Contact:	Left and right dash and right glove box door	None
Manual Restraint System Failures:	None	None
Seat Performance Failures:	None	None

REPAIR

Cost Estimate:	Unknown	Totalled, Unknown
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VEHICLE VELOCITY ESTIMATES¹

<u>Highest Delta "V"</u>	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Reconstruction Program:	CRASHPC and EDCRASH	CRASHPC and EDCRASH
Program Algorithm:	Damage only	Damage only
Travel Speed: ¹	52 k.p.h. (32 m.p.h.)	20 k.p.h. (12 m.p.h.)
Total Delta "V":	24 k.p.h. (15 m.p.h.)	28 k.p.h. (17 m.p.h.)
Longitudinal Delta "V":	-22 k.p.h. (-14 m.p.h.)	-10 k.p.h. (-6 m.p.h.)
Lateral Delta "V":	-8 k.p.h. (-5 m.p.h.)	+26 k.p.h. (+16 m.p.h.)

COLLISION SEQUENCE

PRE-CRASH: According to the Police Accident Report and the case vehicle's driver, the case vehicle (Vigor) was traveling west in the inside, westbound, through lane on a five-lane, divided, U.S. trafficway (i.e., two eastbound and two westbound through lanes, and one westbound left-turn lane) and was attempting to continue in its direction of travel. According to the Police Accident Report and vehicle #2's driver, vehicle #2 (LTD) was traveling south in the southbound lane of a two-lane, undivided, city roadway and was stopped attempting to cross the westbound lanes of the divided trafficway. NOTE: Although the intersection has four legs, the southern leg is a commercial driveway. According to the driver of vehicle #2, she intended to continue straight across the eastbound roadway and enter the commercial driveway on the south leg. According to the Police Accident Report and the driver of vehicle #2, a noncontact vehicle was turning right from the westbound roadway intending to go north. According to the driver of vehicle #2, she entered the intersection and then saw the case vehicle approaching. According to the case vehicle's driver, she attempted to brake when she saw vehicle #2 stopped² in her path. The case vehicle continued essentially straight ahead prior to impact. According to the driver of vehicle #2, she attempted to accelerate². Vehicle #2 surged essentially straight ahead prior to impact. The accident occurred in the westbound roadway in the tee intersection of the two trafficways.

CRASH: According to the vehicle inspections, the front of the case vehicle impacted the left front and passenger sections of vehicle #2 causing the case vehicle's driver side and right-front passenger side supplemental restraint systems (air bags) to deploy. The case vehicle rotated approximately 15 degrees counterclockwise after impact and came to rest approximately 5.5 meters (18 feet) west-southwest

¹ Vehicle travel speeds at impact are between: 48-56 k.p.h. (30-35 m.p.h.) for the case vehicle, and 16-24 k.p.h. (10-15 m.p.h.) for vehicle #2; see discussion on page 31, TRC Vector Analysis Iterations.

² The exact actions of vehicle #2's driver are unknown, but it is entirely possible that she started, stopped, and finally attempted to accelerate across the westbound lanes. On the other hand, the perception by the case vehicle's driver that vehicle #2 stopped in her path may have resulted from her inattention. In either case, vehicle #2 was accelerating prior to impact; see discussion on page 31, TRC Vector Analysis Iterations.

COLLISION SEQUENCE (CONTINUED)

CRASH: (Continued)

of impact heading west-southwest. Vehicle #2 rotated approximately 60 degrees counterclockwise after impact and came to rest approximately 9 meters (30 feet) southwest of impact heading east-southeast.

POST-CRASH:

Occupants: According to the driver of the case vehicle, she remained inside the vehicle at final rest. She was conscious and able to exit the case vehicle under her own power. According to the case vehicle driver, the right front and right rear passengers also remained inside the vehicle at final rest. They were both conscious. The right front passenger was able to exit the case vehicle with some assistance; the right rear passenger was able to exit the case vehicle under her own power. According to the case vehicle's driver, she was restrained by her available, active, three-point, lap and shoulder belt; the right front and right rear passengers were not wearing their available, active, three-point, lap and shoulder belt.

Police: The investigating police agency was notified of the crash within four minutes and arrived on-scene within six minutes. Traffic control procedures were established and emergency medical and towing services were called to assist.

Rescue: According to the Police Accident Report, both drivers and the right rear passenger in the case vehicle refused transportation for medical treatment. According to the case vehicle's driver, she did receive medical treatment later at a physician's office. According to the Police Accident Report and the case vehicle's driver, the right front passenger was transported by ambulance to a medical facility where she was treated and released. According to the case vehicle's driver, the right rear passenger was not treated. According to our interview with the case vehicle's driver (mother of right front passenger and daughter of right rear passenger), she sustained minor injuries which included: small burns to her forearms and a cervical strain. The right front passenger sustained minor injuries which included: a forehead abrasion and a laceration to a left finger. Finally, the right rear passenger sustained a minor injury to her right lower leg. According to the driver of vehicle #2, she was restrained by her available, active, three-point, lap and shoulder belt and sustained a minor abrasion to her left thigh.

Removal: Following the police investigation, the case vehicle and vehicle #2 were towed from the scene.

HUMAN FACTORS/OCCUPANT DATA

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
DRIVERS:	46 year-old female	17 year-old female
Weight:	163 cm (64 in)	160 cm (63 in)

HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

DRIVERS: (Continued)	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Height:	68 kg (150 lbs)	52 kg (115 lbs)
Occupation:	Student	Student
Active Restraint System/Usage:	3-point lap and shoulder/Used	3-point lap and shoulder/Used
Usage Source:	Vehicle inspection, Interviewee, and Police Accident Report	Vehicle inspection, Interviewee, and Police Accident Report
Passive Restraint System/Usage:	Factory installed air bag / air bag deployed	None
Usage Source:	Vehicle inspection, Interviewee, and Police Accident Report	Not applicable
Eye glasses/contacts:	Sunglasses	Contacts
Vehicle Familiarity:	Unknown mileage, driven between 6-12 months	1,600 km (1,000 mi) total; driven two months
Route Familiarity:	Infrequently (second time ever)	Daily
Trip Plan:	Shopping to relative's house	Home to shopping
Manner of Leaving Scene:	Taken by Police to hospital	Walked home
Type of Medical Treatment:	Treatment later	Self Treatment
	<u>Right Front</u>	<u>Right Rear</u>
CASE VEHICLE PASSENGERS:	27 year-old female	78 year-old female
Height:	168 cm (66 in)	157 cm (62 in)
Weight:	77 kg (170 lbs)	59 kg (130 lbs)
Active Restraint System/Usage:	3-point lap and shoulder/Not used	3-point lap and shoulder/Not used
Usage Source:	Vehicle inspection, Interviewee, Police Accident Report	Interviewee, Police Accident Report
Passive Restraint System/Usage:	Factory installed air bag / Air Bag Deployed	None

HUMAN FACTORS/OCCUPANT DATA (CONTINUED)

CASE VEHICLE PASSENGERS:
(Continued)

	<u>Case Vehicle</u>	<u>Vehicle #2</u>
Usage Source:	Vehicle inspection, Interviewee, Police Accident Report	Not applicable
Eye glasses/contacts:	Sunglasses	Not applicable
Manner of Leaving Scene:	Ambulance	Taken by Police to hospital
Type of Medical Treatment:	Treated and released	Not treated

CASE VEHICLE DRIVER INJURIES^{3,4}

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Burns, small, to both forearms	792000.1,3	7 ⁴	Air bag driver's side exhaust gases	{Probable}
Cervical strain ³	640278.1,6	7 ⁴	Air bag driver's side	{Possible}

CASE VEHICLE RIGHT FRONT PASSENGER INJURIES³

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Abrasion forehead	190202.1,7	7 ⁴	Windshield	{Certain}
Laceration left finger, not further specified	790600.1,2	7 ⁴	Windshield	{Probable}

CASE VEHICLE RIGHT REAR PASSENGER INJURIES

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Injured right calf	890099.1,1	7	Interior surface of right rear door	{Possible}

³ The case vehicle driver indicated that her doctor told her she had a strained vertebral ligament. Because of the lack of medical records, the injury description coded is a "best fit".

⁴ The husband of the case vehicle driver and father of the right front passenger did not provide the signed medical releases needed to acquire these occupants medical records.

VEHICLE #2 DRIVER INJURIES

<u>Description of Injury</u>	<u>A.I.S.</u>	<u>Source of Data</u>	<u>Injury Mechanism</u>	<u>Certainty</u>
Abrasion left thigh	890202.1,2	7	Steering wheel rim	{Probable}

DRIVER KINEMATICS

According to the case vehicle's driver, her initial posture just prior to the impact was: sitting upright with her back against the seatback, either her left foot on the floor and her right foot on the brake or both feet on the brake, and both hands on the steering wheel. The vehicle inspection revealed the seat track was set all the way rearward with the seatback in the slightly reclined position. According to the case vehicle driver her seat track position normally is set midway between the forward and middle positions. It is most likely that the driver's seat was moved backwards during the removal of the driver and passenger air bags. According to the case vehicle's driver, she attempted to brake immediately prior to impact and most likely move forward toward the steering wheel.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact sent her forward and most likely to the right causing her to load her available, active, three-point, lap and shoulder belt. The driver stated that her belts locked-up holding her back from absorbing the full force of her deploying air bag. The inspection of the driver's air bag revealed a lipstick mark.

Based on the driver's interview and the crash dynamics, the impact with vehicle #2 caused the front end of the case vehicle to rotate approximately 15 degrees counterclockwise. At final rest the case vehicle remained in the inside westbound lane heading west-southwest. According to the driver, at final rest, she was essentially in the same seating position as she was prior to the crash due to her usage of her lap and shoulder belt.

RIGHT FRONT PASSENGER KINEMATICS

According to the case vehicle's driver and mother of the right front passenger, her daughter's posture immediately prior to the crash was most likely: leaning forward with both feet on the floor and both hands on the dash in front of her bracing for the impending crash. The vehicle inspection showed that the position of the seat track was between the middle and rear positions with the seatback slightly reclined. The driver also confirmed that the seat was similarly positioned at the time of the crash.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact with vehicle #2 caused the right front passenger to move forward, upward, and to her right. The vehicle inspection indicated that the right front passenger contacted and holed the windshield with her head causing, according to the interview with the case vehicle's driver, only a abrasion to her daughter's forehead and a laceration to her left finger. According to the interviewee and the Police Accident Report, the right front occupant was not wearing her available, active, three-point lap and shoulder restraint at the time of impact. The case vehicle's

RIGHT FRONT PASSENGER KINEMATICS (CONTINUED)

driver (mother) indicated that the sunglasses her daughter was wearing, were found on the roadway in front of the case vehicle at final rest. This passenger's right front air bag failed to fully because of an extensive tear the air bag sustained during the deployment. The tear to the air bag occurred during its deployment when the bag's material snagged the mounting screws on the inflator module; see **SELECTED PHOTOGRAPHS #49 through #57**. The air bag also sustained a few other cuts which were caused from the windshield glass.

Based on the crash dynamics, the right front passenger most likely rebounded rearward after striking the windshield. Her exact position at final rest is unknown, but the case vehicle driver indicated that she was able to exit the case vehicle with some assistance.

RIGHT REAR PASSENGER KINEMATICS

According to the case vehicle's driver and daughter of the rear seated passenger, her mother's posture immediately prior to the crash is not known for sure, but she was believed to be: sitting upright with both feet on the floor and both hands on the seat in front of her bracing for the impending crash. According to the case vehicle's driver, this occupant was seated behind the driver (i.e., position "21"); however, contact evidence observed during the vehicle inspection indicates that she was seated behind the right front passenger (i.e., position "23"). The vehicle inspection determined that the rear bench seat was fixed and not adjustable.

Based on the interview with the case vehicle's driver and occupant kinematic principles, the case vehicle's impact with vehicle #2 caused the driver's mother to move forward and to her right contacting the back of the right front seatback with her knees. According to the case vehicle's driver, her mother sustained only an injury to her right lower leg (calf), most likely from contacting the right rear door's interior surface.

According to the driver, her mother was thrown across the rear seat and ended up on the right side at final rest laying on her side. This reported posture at final rest is not inconsistent with this contractor's believed seating location. According to the driver the rear passenger was not wearing her available, active, three-point lap and shoulder belt. According to the Police Accident Report, the rear seated passenger was wearing only the lap portion of her lap and shoulder belt.

AIR BAG SYSTEM

	<u>DRIVER AIR BAG</u>	<u>PASSENGER AIR BAG</u>
Air Bag Diameter (seam-to-seam, deflated):	63 cm (24.8 in) longitudinally; 67 cm (26.4 in) vertically	60 cm (23.6 in) longitudinally
Number of Vent Holes:	Two	Two
Vent Hole Diameter:	3 cm (1.2 in)	9 cm (3.5 in)

AIR BAG SYSTEM (CONTINUED)

	<u>DRIVER AIR BAG</u>	<u>PASSENGER AIR BAG</u>
Vent Hole Clock Positions:	One and eleven o'clock	Three and nine o'clock
Generant Residue:	No unusual amount found	No unusual amount found

DISCUSSION

Although the exact nature and extent of the injuries sustained by the case vehicle's right front passenger are unknown, it does not appear that she was severely injured during this crash. If her right front air bag had properly deployed, given her position on top of the air bag module because of the nonuse of her available restraints, then it is most likely that she would have been severely injured by her deploying right front air bag.

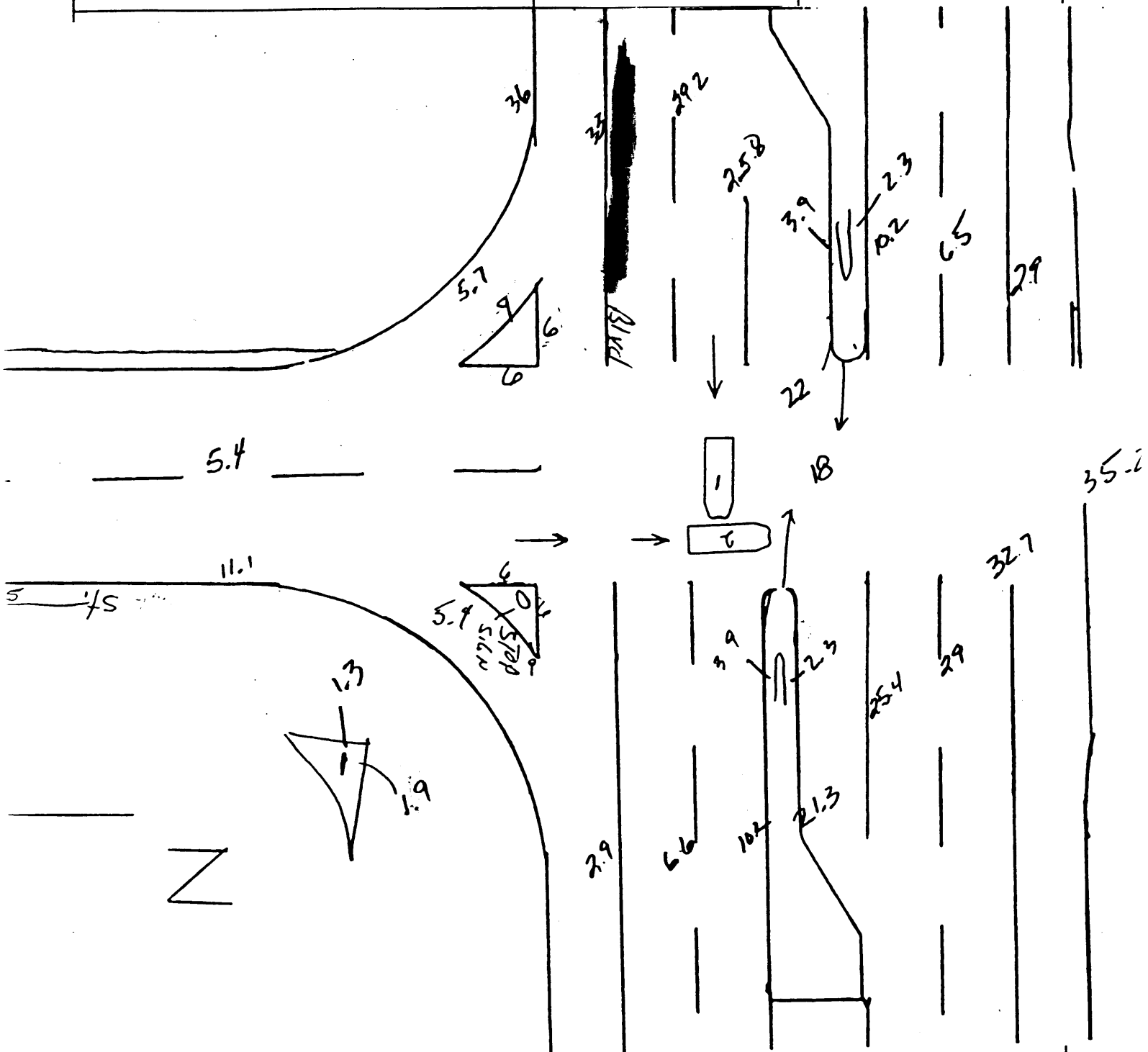
ACCIDENT COLLISION MEASUREMENT TABLE

ACCIDENT COLLISION MEASUREMENT TABLE

**NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM**

[illegible]

Item	Distance and Direction from Reference Point	Distance and Direction from Reference Line



Appendix A:

POLICE ACCIDENT REPORT

TEXAS PEACE OFFICER'S ACCIDENT REPORT ST-3 (REV. 9/2/93)

MAIL TO: STATISTICAL SERVICES, TEXAS DEPARTMENT OF PUBLIC SAFETY

PLACE WHERE ACCIDENT OCCURRED		CITY OR TOWN		LOC. NO.	
COUNTY		CITY OR TOWN		DO NOT WRITE IN THIS SPACE	
IF ACCIDENT WAS OUTSIDE CITY LIMITS, INDICATE DISTANCE FROM NEAREST TOWN		MILES NORTH S E W OF		CITY OR TOWN	
ROAD ON WHICH ACCIDENT OCCURRED		CONSTR. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SPEED LIMIT 40	
INTERSECTING STREET OR RR X'ING NUMBER		CONSTR. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		SPEED LIMIT 30	
NOT AT INTERSECTION		FT. OF		SHOW MILEPOST OR NEAREST INTERSECTING NUMBERED HIGHWAY IF NONE, SHOW NEAREST INTERSECTING STREET OR REFERENCE POINT	
DATE OF ACCIDENT		19 95 DAY OF WEEK		A.M. IF EXACTLY NOON X.P.M. OR MIDNIGHT, SO STATE	

UNIT NO. 1 - MOTOR VEHICLE		VEH IDENT NO JH4CC2664RC		IF BODY STYLE = VAN OR BUS, INDICATE SEATING CAPACITY	
YEAR MODEL 1994 COLOR & MAKE BLACK Honda		MODEL ACURA		BODY STYLE 4dr	
DRIVER'S NAME		ADDRESS		CITY STATE	
DRIVER'S LICENSE TX		DOB 46		RACE W SEX F OCCUPATION Student	
SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSIS)		ALCOHOL/DRUG ANALYSIS RESULT		PEACE OFFICER, EMS DRIVER, FIRE FIGHTER ON EMERGENCY? YES X NO	
1-BREATH 2-BLOOD 3-OTHER 4-NONE 5-REFUSED 4					
LESSOR OWNER X		NAME ALWAYS SHOW LESSEE IF LEASED, OTHERWISE SHOW OWNER		CITY STATE	
LIABILITY X YES		INSURANCE NO		VEHICLE DAMAGE RATING F0-3	

UNIT MOTOR VEHICLE X TRAIN PEDALCYCLIST		VEH IDENT NO 1FABP393XFG		IF BODY STYLE = VAN OR BUS, INDICATE SEATING CAPACITY	
YEAR MODEL 1985 COLOR & MAKE GRAY Ford		MODEL LTD		BODY STYLE 4dr	
DRIVER'S NAME		ADDRESS		CITY STATE	
DRIVER'S LICENSE TX		DOB 17		RACE W SEX F OCCUPATION Student	
SPECIMEN TAKEN (ALCOHOL/DRUG ANALYSIS)		ALCOHOL/DRUG ANALYSIS RESULT		PEACE OFFICER, EMS DRIVER, FIRE FIGHTER ON EMERGENCY? YES X NO	
1-BREATH 2-BLOOD 3-OTHER 4-NONE 5-REFUSED 4					
LESSOR OWNER X		NAME ALWAYS SHOW LESSEE IF LEASED, OTHERWISE SHOW OWNER		CITY STATE	
LIABILITY X YES		INSURANCE NO		VEHICLE DAMAGE RATING LP-3	

DAMAGE TO PROPERTY OTHER THAN VEHICLES					
None					
OBJECT	NAME AND ADDRESS OF OWNER		FEET FROM CURB	DAMAGE ESTIMATE	
LIGHT CONDITION 1	WEATHER 1	SURFACE CONDITION 1	TYPE ROAD SURFACE 1	DESCRIBE ROAD CONDITIONS (INVESTIGATOR'S OPINION)	
1-DAYLIGHT	1-CLEAR/CLOUDY	1-DRY	1-BLACKTOP	Good	
2-DAWN	2-RAINING	2-WET	2-CONCRETE		
3-DARK-NOT LIGHTED	3-SNOWING	3-MUDDY	3-GRAVEL		
4-DARK-LIGHTED	4-FOG	4-SNOWY/ICY	4-SHELL		
5-DUSK	5-BLOWING DUST	5-OTHER	5-DIRT		
			6-OTHER		

IN YOUR OPINION, DID THIS ACCIDENT RESULT IN AT LEAST \$500.00 DAMAGE TO ANY ONE PERSON'S PROPERTY?		X YES NO	
CHARGES FILED		CITATION NUMBER	
NAME None		CHARGE	
NAME		CHARGE	

TIME NOTIFIED OF ACCIDENT 95		P M HOW Dispatched		TIME ARRIVED AT SCENE OF ACCIDENT 95	
TYPED OR PRINTED NAME OF INVESTIGATOR		DATE REPORT MADE 95		IS REPORT COMPLETE X YES NO	
SIGNATURE OF INVESTIGATOR		ID NO.		DEPARTMENT 72 DIST / AREA	

EJECTED	CODE FOR TYPE RESTRAINT USED	AIRBAG CODE	HELMET USE	CODE FOR INJURY SEVERITY	ALCOHOL/DRUG ANALYSIS (COMPLETE IF CASUALTIES NOT IN MOTOR VEHICLE)
A - NOT APPLICABLE Y - YES N - NO P - PARTIALLY U - UNK	A - SEATBELT & SHOULDER STRAP B - SEATBELT & NO SHOULDER STRAP C - CHILD RESTRAINT E - SHOULDER STRAP ONLY N - NONE	Y - DEPLOYED N - NO DEPLOYMENT U - UNK IF DEPLOYED	1 - WORN-DAMAGED 2 - WORN-NOT DAMAGED 3 - WORN-UNK IF DAMAGED 4 - NOT WORN 9 - UNK IF WORN	K - KILLED A - INCAPACITATING INJURY B - NON INCAPACITATING C - POSSIBLE INJURY N - NOT INJURED	1 - BREATH 2 - BLOOD 3 - OTHER 4 - NONE 5 - REFUSED

UNIT NO. 1	TOWED DUE TO DAMAGE	VEHICLE REMOVED TO
DAMAGE RATING FD-3	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	BY Service Center Wrecker Service

OCCUPANT'S POSITION		COMPLETE ALL DATA ON ALL OCCUPANTS' NAMES, POSITIONS, RESTRAINTS USED, ETC.; HOWEVER, IT IS NOT NECESSARY TO SHOW ADDRESSES UNLESS KILLED OR INJURED.	LECTED	TYPE RESTRAINT USED	AIRBAG	HELMET	AGE	SEX	INJURY CODE
1	DRIVER	SEE FRONT	N	A	Y		46	F	N
2	FR	[REDACTED] TX	N	N	Y		26	F	B
3	RL	[REDACTED] TX	N	B			78	F	N

UNIT NO. 2	TOWED DUE TO DAMAGE	VEHICLE REMOVED TO
DAMAGE RATING LP-3	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	BY Service Center Wrecker Service

OCCUPANT'S POSITION		COMPLETE ALL DATA ON ALL OCCUPANTS' NAMES, POSITIONS, RESTRAINTS USED, ETC.; HOWEVER, IT IS NOT NECESSARY TO SHOW ADDRESSES UNLESS KILLED OR INJURED.	LECTED	TYPE RESTRAINT USED	AIRBAG	HELMET	AGE	SEX	INJURY CODE
6	DRIVER	SEE FRONT	N	A			17	F	N

COMPLETE IF CASUALTIES NOT IN MOTOR VEHICLE

PEDESTRIAN, PEDALCYCLIST ETC	CASUALTY NAME (LAST NAME FIRST)	CASUALTY ADDRESS	TYPE SPECIMEN TAKEN	RESULT	HELMET	AGE	SEX	INJURY CODE

DISPOSITION OF KILLED AND INJURED

ITEM NUMBERS	TAKEN TO	BY	TIME NOTIFIED	TIME ARRIVED AT SCENE	NO. ATTENDANTS INC. DRIVER
2	Hospital	Ambulance			2
1,3,6	Refused Treatment				

COMPLETE THIS SECTION IF PERSON KILLED

ITEM NUMBER	DATE OF DEATH	TIME OF DEATH	ITEM NUMBER	DATE OF DEATH	TIME OF DEATH	ITEM NUMBER	DATE OF DEATH	TIME OF DEATH

INVESTIGATOR'S NARRATIVE OPINION OF WHAT HAPPENED (ATTACH ADDITIONAL SHEETS IF NECESSARY)

Unit one was west bound in the [REDACTED] block of [REDACTED] Blvd in the left lane. Unit two was south bound in the [REDACTED] block of [REDACTED] st. At [REDACTED] unit two pulled out in front of unit one and unit one struck unit two. Unit two driver said she did not see unit one because another vehicle turning right onto [REDACTED] st blocked her view.

DIAGRAM !! ONE WAY !! TWO WAY !! DIVIDED

○ INDICATE NORTH

Attached

FACTORS AND CONDITIONS LISTED ARE THE INVESTIGATOR'S OPINION

FACTORS/CONDITIONS CONTRIBUTING

UNIT 1	1	2	3
UNIT 2	35	2	3

OTHER FACTORS/CONDITIONS MAY OR MAY NOT HAVE CONTRIBUTED

UNIT 1	1	2
UNIT 2	1	2

0-NO CONTROL OR INOPERATIVE

- 1-OFFICER OR FLAGMAN
2-STOP AND GO SIGNAL
3-STOP SIGN
4-FLASHING RED LIGHT

TRAFFIC CONTROL

- 5-TURN MARKS
6-WARNING SIGN
7-RR GATES OR SIGNALS
8-YIELD SIGN
9-CENTER STRIPS OR DIVIDER

10-NO PASSING ZONE
11-OTHER CONTROL

3

- 1 ANIMAL ON ROAD - DOMESTIC
- 2 ANIMAL ON ROAD - WILD
- 3 BACKED WITHOUT SAFETY
- 4 CHANGED LANE WHEN UNSAFE
- 5 DEFECTIVE OR NO HEADLAMPS
- 6 DEFECTIVE OR NO STOP LAMPS
- 7 DEFECTIVE OR NO TAIL LAMPS
- 8 DEFECTIVE OR NO TURN SIGNAL LAMPS
- 9 DEFECTIVE OR NO TRAILER BRAKES
- 10 DEFECTIVE OR NO VEHICLE BRAKES
- 11 DEFECTIVE STEERING MECHANISM
- 12 DEFECTIVE OR SLICK TIRES
- 13 DEFECTIVE TRAILER HITCH
- 14 DISABLED IN TRAFFIC LANE
- 15 DISREGARD STOP AND GO SIGNAL
- 16 DISREGARD STOP SIGN OR LIGHT
- 17 DISREGARD TURN MARKS AT INTERSECTION
- 18 DISREGARD WARNING SIGN AT CONSTRUCTION

- 19 DISTRACTION IN VEHICLE
- 20 DRIVER INATTENTION
- 21 DROVE WITHOUT HEADLIGHTS
- 22 FAILED TO CONTROL SPEED
- 23 FAILED TO DRIVE IN SINGLE LANE
- 24 FAILED TO GIVE HALF OF ROADWAY
- 25 FAILED TO HEED WARNING SIGN
- 26 FAILED TO PASS TO LEFT SAFELY
- 27 FAILED TO PASS TO RIGHT SAFELY
- 28 FAILED TO SIGNAL OR GAVE WRONG SIGNAL
- 29 FAILED TO STOP AT PROPER PLACE
- 30 FAILED TO STOP FOR SCHOOL BUS
- 31 FAILED TO STOP FOR TRAIN
- 32 FAILED TO YIELD ROW - EMERGENCY VEHICLE
- 33 FAILED TO YIELD ROW - OPEN INTERSECTION
- 34 FAILED TO YIELD ROW - PRIVATE DRIVE
- 35 FAILED TO YIELD ROW - STOP SIGN
- 36 FAILED TO YIELD ROW - TO PEDESTRIAN

- 37 FAILED TO YIELD ROW - TURNING LEFT
- 38 FAILED TO YIELD ROW - TURN ON RED
- 39 FAILED TO YIELD ROW - YIELD SIGN
- 40 FATIGUED OR ASLEEP
- 41 FAULTY EVASIVE ACTION
- 42 FIRE IN VEHICLE
- 43 FLEEING OR EVADING POLICE
- 44 FOLLOWED TOO CLOSELY
- 45 HAD BEEN DRINKING
- 46 HANDICAPPED DRIVER (EXPLAIN IN NARRATIVE)
- 47 ILL (EXPLAIN IN NARRATIVE)
- 48 IMPAIRED VISIBILITY (EXPLAIN IN NARRATIVE)
- 49 IMPROPER START FROM PARKED POSITION
- 50 LOAD NOT SECURED
- 51 OPENED DOOR INTO TRAFFIC LANE
- 52 OVERSIZE VEHICLE OR LOAD
- 53 OVERTAKE AND PASS INSUFFICIENT CLEARANCE
- 54 PARKED AND FAILED TO SET BRAKES
- 55 PARKED IN TRAFFIC LANE

- 56 PARKED WITHOUT LIGHTS
- 57 PASSED IN NO PASSING ZONE
- 58 PASSED ON RIGHT SHOULDER
- 59 PEDESTRIAN FAILED TO YIELD ROW TO VEHICLE
- 60 SPEEDING - UNSAFE (UNDER LIMIT)
- 61 SPEEDING - OVER LIMIT
- 62 TAKING MEDICATION (EXPLAIN IN NARRATIVE)
- 63 TURNED IMPROPERLY - CUT CORNER ON LEFT
- 64 TURNED IMPROPERLY - WIDE RIGHT
- 65 TURNED IMPROPERLY - WRONG LANE
- 66 TURNED WHEN UNSAFE
- 67 UNDER INFLUENCE - ALCOHOL
- 68 UNDER INFLUENCE - DRUG
- 69 WRONG SIDE - APPROACH OR IN INTERSECTION
- 70 WRONG SIDE - NOT PASSING
- 71 WRONG WAY - ONE WAY ROAD
- 72 OTHER FACTOR (WRITE IN ON LINE BELOW)

Appendix B:

RECONSTRUCTION PROGRAM RESULTS:

**CRASHPC
(DAMAGE ONLY ALGORITHM)**

**CRASHPC
(BARRIER OPTION--CASE VEHICLE AND VEHICLE #2)**

**EDCRASH
(DAMAGE ONLY ALGORITHM)**

TRC VECTOR ANALYSIS ITERATIONS

CRASHPC

(DAMAGE ONLY ALGORITHM)



U.S. Department of Transportation
National Highway Traffic Safety
Administration

CRASHPC PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Identifying Title			
<u>10</u> Primary Sampling Unit	<u>9517</u> Case No.-Stratum	<u>01</u> Accident Event Sequence No.	_____ Date (Month, day, year) of Run
CRASHPC Vehicle Identification			
Vehicle 1	<u>1994</u>	<u>ACURA</u>	<u>VIGOR GS</u>
Vehicle 2	<u>1985</u>	<u>FORD</u>	<u>LTD</u>
	Year	Make	Model
			NASS Veh. No. <u>V2</u>

GENERAL INFORMATION

VEHICLE 1		VEHICLE 2	
Size	<u>3</u>	Size	<u>3</u>
Weight		Weight	
<u>1485</u> + <u>204</u> + <u>11</u> = <u>1700</u> kg		<u>1374</u> + <u>52</u> + <u>7</u> = <u>1433</u> kg	
Curb Occupant(s) Cargo		Curb Occupant(s) Cargo	
CDC	<u>01FDEW1</u>	CDC	<u>10LYEW3</u>
PDOF (-180 to +180)	<u>020°</u>	PDOF (-180 to +180)	<u>070°</u>
Stiffness	<u>9</u>	Stiffness	<u>3</u>

SCENE INFORMATION

Rest and Impact Positions <input checked="" type="checkbox"/> No, Go To Damage Information <input type="checkbox"/> Yes			
VEHICLE 1		VEHICLE 2	
Rest Position	X _____ m Y _____ m PSI _____ °	Rest Position	X _____ m Y _____ m PSI _____ °
Impact Position	X _____ m Y _____ m PSI _____ °	Impact Position	X _____ m Y _____ m PSI _____ °
Slip Angle (-180 to +180)	_____ °	Slip Angle (-180 to +180)	_____ °

VEHICLE MOTION

Sustained Contact <input type="checkbox"/> No <input type="checkbox"/> Yes	
VEHICLE 1	VEHICLE 2
Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes	Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes
Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes	Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes
End of Rotation Position X _____ m Y _____ m PSI _____ °	End of Rotation Position X _____ m Y _____ m PSI _____ °
Curved Path <input type="checkbox"/> No <input type="checkbox"/> Yes	Curved Path <input type="checkbox"/> No <input type="checkbox"/> Yes
Point on Path X _____ m Y _____ m	Point on Path X _____ m Y _____ m
Rotation Direction <input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW	Rotation Direction <input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW
Rotation > 360° <input type="checkbox"/> No <input type="checkbox"/> Yes	Rotation > 360° <input type="checkbox"/> No <input type="checkbox"/> Yes

FRICTION INFORMATION

Coefficient of Friction _____

Rolling Resistance Option _____

Vehicle 1 Rolling Resistance

LF _____ RF _____

LR _____ RR _____

Vehicle 2 Rolling Resistance

LF _____ RF _____

LR _____ RR _____

TRAJECTORY INFORMATION

Trajectory Data ☐ No ☐ Yes*If No, Go To Damage Information*

Vehicle 1 Steer Angles

LF _____ ° RF _____ °

LR _____ ° RR _____ °

Vehicle 2 Steer Angles

LF _____ ° RF _____ °

LR _____ ° RR _____ °

Terrain Boundary ☐ No ☐ Yes

First Point

X _____ m Y _____ m

Second Point

X _____ m Y _____ m

Secondary Coefficient of Friction _____

DAMAGE INFORMATION

VEHICLE 1

Damage Length L 162 cmCrush Depths C₁ 26 cmC₂ 78 cmC₃ 17 cmC₄ 13 cmC₅ 77 cmC₆ 9 cmDamage Offset D ⊕ 7 cm

VEHICLE 2

Damage Length L 252 cmCrush Depths C₁ 0 cmC₂ 10 cmC₃ 35 cmC₄ 36 cmC₅ 19 cmC₆ 0 cmDamage Offset D ⊕ 6 cm

IF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE NOT IN TRANSPORT, FILL IN THE INFORMATION BELOW.

Model Year: _____

Make: _____

Model: _____

VIN: _____

The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.

Complete and ATTACH the appropriate vehicle damage sketch and dimensions to the Form.

SUMMARY OF CRASHPC RESULTS USING DAMAGE

Special Crash Investigations; TRC/IU Case 95-17, Task 9526

SPEED CHANGE (DAMAGE)

VEHICLE #1

TOTAL 24 KPH (15 MPH)
 LONGITUDINAL -22 KPH (-14 MPH)
 LATITUDINAL -8 KPH (-5 MPH)
 PDOF ANGLE 20 DEGREES
 ENERGY DISSIPATED = 39487 JOULES (29120 FT-LB)

VEHICLE #2

TOTAL 28 KPH (17 MPH)
 LONGITUDINAL -10 KPH (-6 MPH)
 LATITUDINAL 26 KPH (16 MPH)
 PDOF ANGLE -70 DEGREES
 ENERGY DISSIPATED = 51594 JOULES (38049 FT-LB)

DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	3	3
STIFFNESS CATEGORY	9	3
VEHICLE WEIGHT	1700 KGS (3748 LBS)	1433 KGS (3159 LBS)
CDC	01FDEW1	10LYEW3
PDOF ANGLE	20 DEGREES	-70 DEGREES
CRUSH LENGTH	162 CM. (64 IN.)	252 CM. (99 IN.)
C1	26 CM. (10 IN.)	0 CM. (0 IN.)
C2	18 CM. (7 IN.)	10 CM. (4 IN.)
C3	17 CM. (7 IN.)	35 CM. (14 IN.)
C4	13 CM. (5 IN.)	36 CM. (14 IN.)
C5	11 CM. (4 IN.)	19 CM. (7 IN.)
C6	9 CM. (4 IN.)	0 CM. (0 IN.)
D	7 CM. (3 IN.)	6 CM. (2 IN.)
D'	-6 CM. (-2 IN.)	13 CM. (5 IN.)

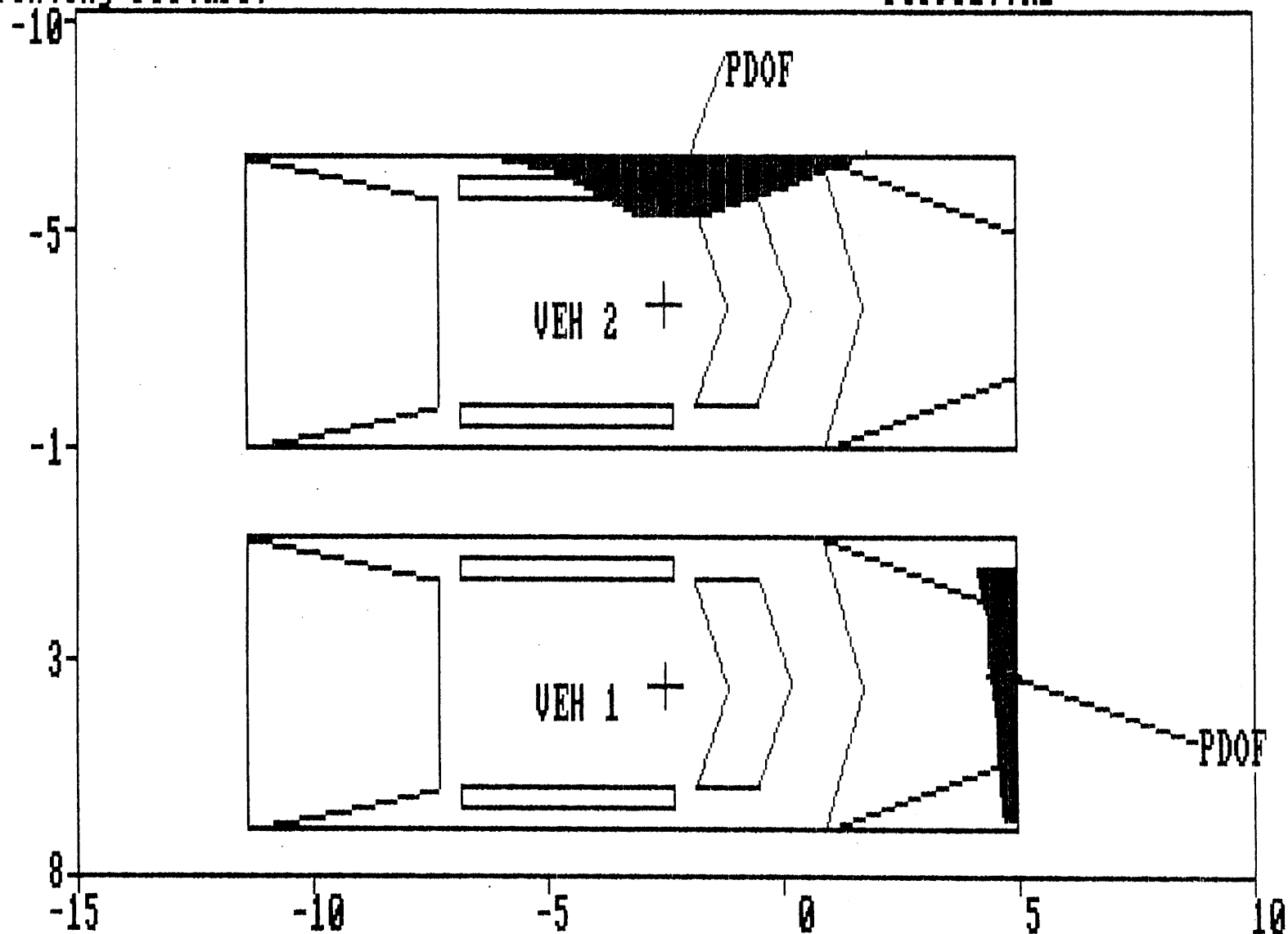
(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	130 CM. (51 IN.)	130 CM. (51 IN.)
CG TO REAR AXLE	141 CM. (56 IN.)	141 CM. (56 IN.)
TRACK	150 CM. (59 IN.)	150 CM. (59 IN.)
CG TO FRONT OF VEH	228 CM. (90 IN.)	228 CM. (90 IN.)
CG TO REAR OF VEH	-270 CM. (-106 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	92 CM. (36 IN.)	92 CM. (36 IN.)
MOMENT OF INERTIA	14693 KGS (32391 LBS)	12385 KGS (27304 LBS)
VEHICLE MASS	4 KGS (10 LBS)	4 KGS (8 LBS)

Printing Picture:

SCI9517.R1



DAMAGE DESCRIPTION

CRASHPC

(BARRIER OPTION--CASE VEHICLE AND VEHICLE #2)



U.S. Department of Transportation
National Highway Traffic Safety
Administration

CRASHPC PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Identifying Title			
<u>10</u>	<u>9517</u>	<u>01</u>	_____
Primary Sampling Unit	Case No.-Stratum	Accident Event Sequence No.	Date (Month, day, year) of Run
CRASHPC Vehicle Identification			
Vehicle 1	<u>1994</u>	<u>ACURA</u>	<u>VIGOR GS</u>
Vehicle 2	<u>1985</u>	<u>FORD</u>	<u>LTD</u>
Year	Make	Model	NASS Veh. No.
			<u>V2</u>

GENERAL INFORMATION

VEHICLE 1		VEHICLE 2	
Size	<u>3</u>	Size	<u>11</u>
Weight		Weight	
<u>1485</u> + <u>204</u> + <u>11</u> = <u>1700</u> kg		_____ + _____ + _____ = _____ kg	
Curb Occupant(s) Cargo		Curb Occupant(s) Cargo	
CDC	<u>01FDEW1</u>	CDC	_____
PDOF (-180 to +180)	<u>+020°</u>	PDOF (-180 to +180)	_____°
Stiffness	<u>9</u>	Stiffness	_____

SCENE INFORMATION

Rest and Impact Positions <input checked="" type="checkbox"/> No, Go To Damage Information <input type="checkbox"/> Yes			
VEHICLE 1		VEHICLE 2	
Rest Position	X _____ m Y _____ m PSI _____ °	Rest Position	X _____ m Y _____ m PSI _____ °
Impact Position	X _____ m Y _____ m PSI _____ °	Impact Position	X _____ m Y _____ m PSI _____ °
Slip Angle(-180 to +180)	_____ °	Slip Angle (-180 to +180)	_____ °

VEHICLE MOTION

Sustained Contact <input type="checkbox"/> No <input type="checkbox"/> Yes			
VEHICLE 1		VEHICLE 2	
Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes		Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes	
Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes		Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes	
End of Rotation Position	X _____ m Y _____ m PSI _____ °	End of Rotation Position	X _____ m Y _____ m PSI _____ °
Curved Path	<input type="checkbox"/> No <input type="checkbox"/> Yes	Curved Path	<input type="checkbox"/> No <input type="checkbox"/> Yes
Point on Path	X _____ m Y _____ m	Point on Path	X _____ m Y _____ m
Rotation Direction	<input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW	Rotation Direction	<input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW
Rotation >360°	<input type="checkbox"/> No <input type="checkbox"/> Yes	Rotation >360°	<input type="checkbox"/> No <input type="checkbox"/> Yes

FRICTION INFORMATION

Coefficient of Friction _____
 Rolling Resistance Option _____

Vehicle 1 Rolling Resistance

LF _____ RF _____
 LR _____ RR _____

Vehicle 2 Rolling Resistance

LF _____ RF _____
 LR _____ RR _____

TRAJECTORY INFORMATION

Trajectory Data ☐ No ☐ Yes

If No, Go To Damage Information

Vehicle 1 Steer Angles

LF _____ ° RF _____ °
 LR _____ ° RR _____ °

Vehicle 2 Steer Angles

LF _____ ° RF _____ °
 LR _____ ° RR _____ °

Terrain Boundary ☐ No ☐ Yes

First Point

X _____ m Y _____ m

Second Point

X _____ m Y _____ m

Secondary Coefficient of Friction _____

DAMAGE INFORMATION

VEHICLE 1

Damage Length L 162 cm

Crush Depths
 C₁ 26 cm
 C₂ 18 cm
 C₃ 17 cm
 C₄ 13 cm
 C₅ 11 cm
 C₆ 9 cm

Damage Offset D ⊕ 7 cm

VEHICLE 2

Damage Length L _____ cm

Crush Depths
 C₁ _____ cm
 C₂ _____ cm
 C₃ _____ cm
 C₄ _____ cm
 C₅ _____ cm
 C₆ _____ cm

Damage Offset D ± _____ cm

IF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE *NOT IN TRANSPORT*, FILL IN THE INFORMATION BELOW.

Model Year: _____
 Make: _____
 Model: _____
 VIN: _____

The Weight, CDC, Scene Data and Damage Information for this vehicle should be recorded above.

Complete and ATTACH the appropriate vehicle damage sketch and dimensions to the Form.

SUMMARY OF CRASHPC RESULTS USING DAMAGE

Special Crash Investigations; TRC/IU Case 95-17, Task 9526

SPEED CHANGE (DAMAGE)

VEHICLE #1

TOTAL 21 KPH (13 MPH)
 LONGITUDINAL -20 KPH (-13 MPH)
 LATITUDINAL -7 KPH (-5 MPH)
 PDOF ANGLE 20 DEGREES
 ENERGY DISSIPATED = 39487 JOULES (29120 FT-LB)

VEHICLE #2

TOTAL 0 KPH (0 MPH)
 LONGITUDINAL 0 KPH (0 MPH)
 LATITUDINAL 0 KPH (0 MPH)
 PDOF ANGLE 0 DEGREES
 ENERGY DISSIPATED = 0 JOULES (0 FT-LB)

DAMAGE DATA

VEHICLE #1

VEHICLE #2

SIZE CATEGORY	3	11
STIFFNESS CATEGORY	9	0
VEHICLE WEIGHT	1700 KGS (3748 LBS)	***** KGS (2204586 LBS) *
CDC	01FDEW1	BARRIER
PDOF ANGLE	20 DEGREES	0 DEGREES *
CRUSH LENGTH	162 CM. (64 IN.)	0 CM. (0 IN.) *
C1	26 CM. (10 IN.)	0 CM. (0 IN.) *
C2	18 CM. (7 IN.)	0 CM. (0 IN.) *
C3	17 CM. (7 IN.)	0 CM. (0 IN.) *
C4	13 CM. (5 IN.)	0 CM. (0 IN.) *
C5	11 CM. (4 IN.)	0 CM. (0 IN.) *
C6	9 CM. (4 IN.)	0 CM. (0 IN.) *
D	7 CM. (3 IN.)	0 CM. (0 IN.) *
D'	-6 CM. (-2 IN.)	0 CM. (0 IN.) *

(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

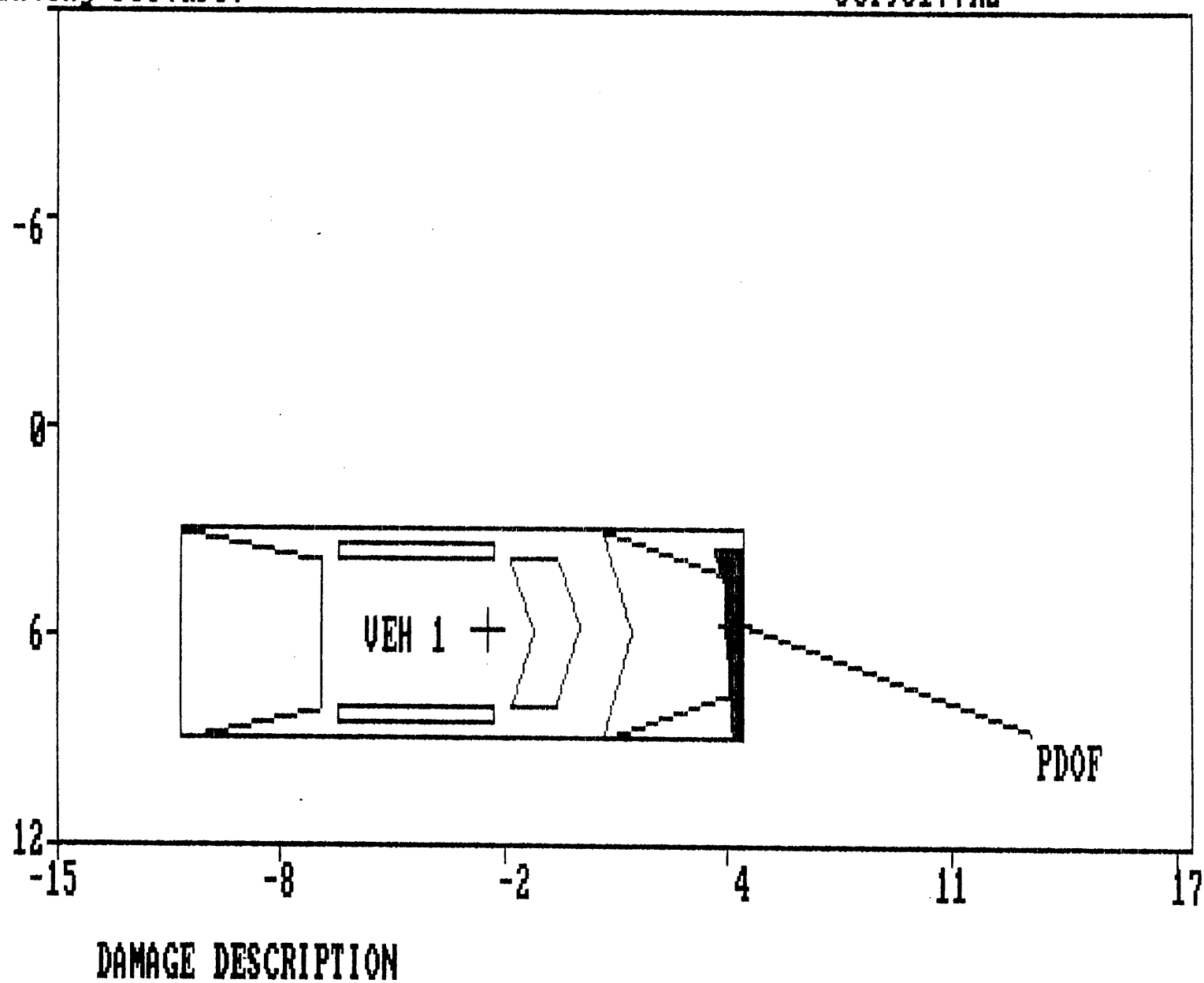
VEHICLE #1

VEHICLE #2

CG TO FRONT AXLE	130 CM. (51 IN.)	127 CM. (50 IN.)
CG TO REAR AXLE	141 CM. (56 IN.)	127 CM. (50 IN.)
TRACK	150 CM. (59 IN.)	127 CM. (50 IN.)
CG TO FRONT OF VEH	228 CM. (90 IN.)	127 CM. (50 IN.)
CG TO REAR OF VEH	-270 CM. (-106 IN.)	-127 CM. (-50 IN.)
CG TO SIDE OF VEH	92 CM. (36 IN.)	127 CM. (50 IN.)
MOMENT OF INERTIA	14693 KGS (32391 LBS)	***** KGS (***** LBS)
VEHICLE MASS	4 KGS (10 LBS)	2600 KGS (5732 LBS)

Printing Picture:

SCI9517.R2





U.S. Department of Transportation
National Highway Traffic Safety
Administration

CRASHPC PROGRAM SUMMARY

(All Measurements in Metric)

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

Identifying Title			
<u>10</u> Primary Sampling Unit	<u>9517</u> Case No.-Stratum	<u>01</u> Accident Event Sequence No.	_____ Date (Month, day, year) of Run
CRASHPC Vehicle Identification			
Vehicle 1	<u>1994</u> Year	<u>ACURA</u> Make	<u>VIGOR GS</u> Model
Vehicle 2	<u>1985</u> Year	<u>FORD</u> Make	<u>LTD</u> Model
			<u>CV</u> NASS Veh. No.

GENERAL INFORMATION

VEHICLE 1		VEHICLE 2	
Size	<u>11</u>	Size	<u>3</u>
Weight		Weight	
Curb + Occupant(s) + Cargo = _____ kg		<u>1374</u> + <u>52</u> + <u>7</u> = <u>1433</u> kg	
CDC		CDC	<u>10 L Y E W 3</u>
PDOF (-180 to +180) _____ °		PDOF (-180 to +180) <u>0070</u> °	
Stiffness		Stiffness	<u>3</u>

SCENE INFORMATION

VEHICLE 1		VEHICLE 2	
Rest and Impact Positions <input checked="" type="checkbox"/> No, Go To Damage Information <input type="checkbox"/> Yes			
Rest Position	X _____ m Y _____ m PSI _____ °	Rest Position	X _____ m Y _____ m PSI _____ °
Impact Position	X _____ m Y _____ m PSI _____ °	Impact Position	X _____ m Y _____ m PSI _____ °
Slip Angle(-180 to +180) _____ °		Slip Angle (-180 to +180) _____ °	

VEHICLE MOTION

VEHICLE 1		VEHICLE 2	
Sustained Contact <input type="checkbox"/> No <input type="checkbox"/> Yes			
Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes		Vehicle Rotation <input type="checkbox"/> No <input type="checkbox"/> Yes	
Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes		Rotation Stop Before Rest <input type="checkbox"/> No <input type="checkbox"/> Yes	
End of Rotation Position	X _____ m Y _____ m PSI _____ °	End of Rotation Position	X _____ m Y _____ m PSI _____ °
Curved Path <input type="checkbox"/> No <input type="checkbox"/> Yes		Curved Path <input type="checkbox"/> No <input type="checkbox"/> Yes	
Point on Path X _____ m Y _____ m		Point on Path X _____ m Y _____ m	
Rotation Direction <input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW		Rotation Direction <input type="checkbox"/> None <input type="checkbox"/> CW <input type="checkbox"/> CCW	
Rotation >360° <input type="checkbox"/> No <input type="checkbox"/> Yes		Rotation >360° <input type="checkbox"/> No <input type="checkbox"/> Yes	

FRICTION INFORMATION

Coefficient of Friction _____
 Rolling Resistance Option _____

Vehicle 1 Rolling Resistance

LF _____ RF _____
 LR _____ RR _____

Vehicle 2 Rolling Resistance

LF _____ RF _____
 LR _____ RR _____

TRAJECTORY INFORMATION

Trajectory Data ☐ No ☐ Yes
If No, Go To Damage Information

Vehicle 1 Steer Angles

LF _____ ° RF _____ °
 LR _____ ° RR _____ °

Vehicle 2 Steer Angles

LF _____ ° RF _____ °
 LR _____ ° RR _____ °

Terrain Boundary ☐ No ☐ Yes

First Point

X _____ m Y _____ m

Second Point

X _____ m Y _____ m

Secondary Coefficient of Friction _____

DAMAGE INFORMATION

VEHICLE 1

Damage Length L _____ cm

Crush Depths C₁ _____ cm
 C₂ _____ cm
 C₃ _____ cm
 C₄ _____ cm
 C₅ _____ cm
 C₆ _____ cm

Damage Offset D \pm _____ cm

VEHICLE 2

Damage Length L 252 cm

Crush Depths C₁ 0 cm
 C₂ 10 cm
 C₃ 35 cm
 C₄ 36 cm
 C₅ 19 cm
 C₆ 0 cm

Damage Offset D \oplus 6 cm

IF THIS COMMON IMPACT WAS WITH A MOTOR VEHICLE *NOT IN TRANSPORT*, FILL IN THE INFORMATION BELOW.

Model Year: _____
 Make: _____
 Model: _____
 VIN: _____

The Weight, CDC, Scene Data and Damage Information
 for this vehicle should be recorded above.

Complete and ATTACH the appropriate vehicle damage sketch and dimensions to the Form.

SUMMARY OF CRASHPC RESULTS USING DAMAGE

Special Crash Investigations; TRC/IU Case 95-17, Task 9526

SPEED CHANGE (DAMAGE)

VEHICLE #1

TOTAL 0 KPH (0 MPH)
 LONGITUDINAL 0 KPH (0 MPH)
 LATITUDINAL 0 KPH (0 MPH)
 PDOF ANGLE 0 DEGREES
 ENERGY DISSIPATED = 0 JOULES (0 FT-LB)

VEHICLE #2

TOTAL 30 KPH (19 MPH)
 LONGITUDINAL -10 KPH (-6 MPH)
 LATITUDINAL 28 KPH (18 MPH)
 PDOF ANGLE -70 DEGREES
 ENERGY DISSIPATED = 51594 JOULES (38049 FT-LB)

DAMAGE DATA

VEHICLE #1

VEHICLE #2

SIZE CATEGORY	11	3
STIFFNESS CATEGORY	0	3
VEHICLE WEIGHT	***** KGS (2204586 LBS) *	1433 KGS (3159 LBS)
CDC	BARRIER	10LYEW3
PDOF ANGLE	0 DEGREES *	-70 DEGREES
CRUSH LENGTH	0 CM. (0 IN.) *	252 CM. (99 IN.)
C1	0 CM. (0 IN.) *	0 CM. (0 IN.)
C2	0 CM. (0 IN.) *	10 CM. (4 IN.)
C3	0 CM. (0 IN.) *	35 CM. (14 IN.)
C4	0 CM. (0 IN.) *	36 CM. (14 IN.)
C5	0 CM. (0 IN.) *	19 CM. (7 IN.)
C6	0 CM. (0 IN.) *	0 CM. (0 IN.)
D	0 CM. (0 IN.) *	6 CM. (2 IN.)
D'	0 CM. (0 IN.) *	13 CM. (5 IN.)

(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

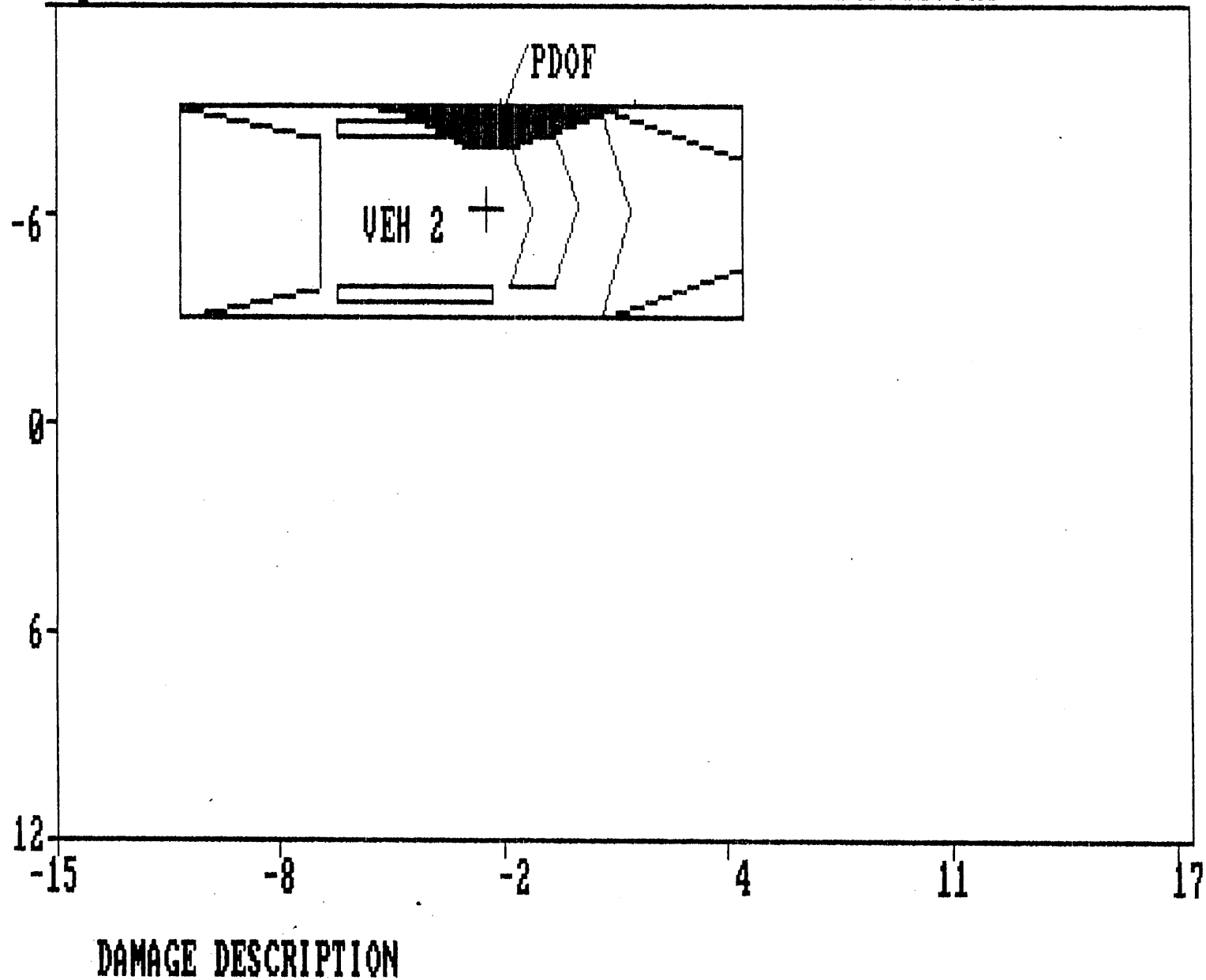
VEHICLE #1

VEHICLE #2

CG TO FRONT AXLE	127 CM. (50 IN.)	130 CM. (51 IN.)
CG TO REAR AXLE	127 CM. (50 IN.)	141 CM. (56 IN.)
TRACK	127 CM. (50 IN.)	150 CM. (59 IN.)
CG TO FRONT OF VEH	127 CM. (50 IN.)	228 CM. (90 IN.)
CG TO REAR OF VEH	-127 CM. (-50 IN.)	-270 CM. (-106 IN.)
CG TO SIDE OF VEH	127 CM. (50 IN.)	92 CM. (36 IN.)
MOMENT OF INERTIA	***** KGS (***** LBS)	12385 KGS (27304 LBS)
VEHICLE MASS	2600 KGS (5732 LBS)	4 KGS (8 LBS)

Printing Picture:

SCI9517.R3



EDCRASH

(DAMAGE ONLY ALGORITHM)

No **A** and **B** values are available for the case vehicle; therefore, the default values were used.

MESSAGES:

VEHICLE # 1

VEHICLE # 2

IMPACT SPEED km/h		SPEED CHANGE km/h			BASIS FOR RESULTS
FWD	LAT	TOTAL	LONG.	LATERAL	
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND CONSERVATION OF LINEAR MOMENTUM
N/A	N/A	N/A	N/A	N/A	SPINOUT TRAJECTORIES AND DAMAGE
		28.0	-9.6	26.3	DAMAGE DATA ONLY

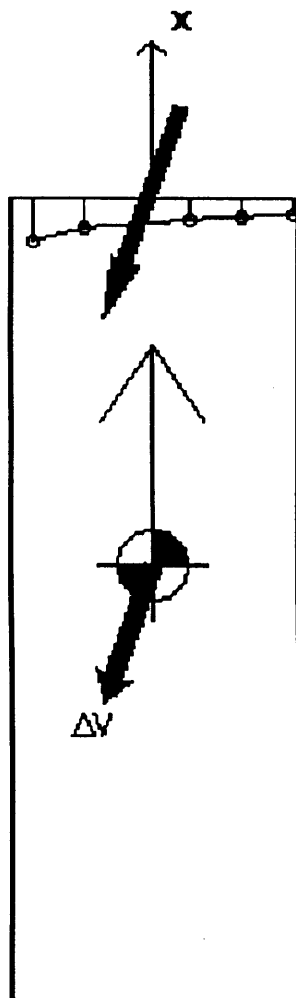
SUMMARY OF DAMAGE DATA
(NOTE: '**' indicates default value)

	Vehicle #1	Vehicle #2
CLASS / STIFFNESS CATEGORIES	3 / 9	3 / 3
WEIGHT	1700.0 kg	1433.0 kg
CDC	01FDEW1	10LYEW3
DAMAGE WIDTH	162.0 cm	252.0 cm
CRUSH DEPTH 1	26.0 cm	0.0 cm
CRUSH DEPTH 2	18.0 cm	10.0 cm
CRUSH DEPTH 3	17.0 cm	35.0 cm
CRUSH DEPTH 4	13.0 cm	36.0 cm
CRUSH DEPTH 5	11.0 cm	19.0 cm
CRUSH DEPTH 6	9.0 cm	0.0 cm
DAMAGE MIDPOINT OFFSET	7.0 cm	6.0 cm
DAMAGE ENERGY	39480.8 Joules	51578.1 Joules
MAGNITUDE OF PRINCIPAL FORCE	181270.2 N	292494.2 N
DIRECTION OF PRINCIPAL FORCE	20.0 deg	-70.0 deg
MOMENT ARM OF PRINCIPAL FORCE	-80.9 cm	-13.9 cm
DAMAGE CENTROID	-6.1 cm	13.1 cm

DIMENSIONAL, INERTIAL AND CRUSH STIFFNESS PROPERTIES
(NOTE: '**' indicates default value)

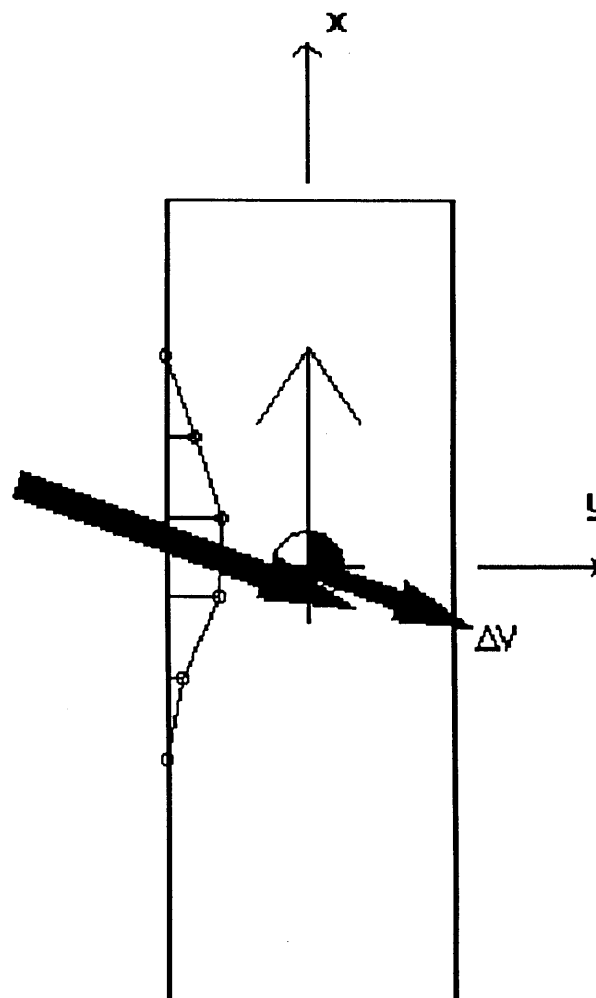
	Vehicle #1		Vehicle #2	
CG TO FRONT AXLE	130.3 cm	**	130.3 cm	**
CG TO REAR AXLE	141.0 cm	**	141.0 cm	**
TRACKWIDTH	151.4 cm		144.3 cm	
YAW MOMENT OF INERTIA	3642.9 kg-m^2	**	3070.7 kg-m^2	**
MASS	1697.2 kg		1430.6 kg	
BODY LENGTH FROM CG TO FRONT	228.1 cm	**	228.1 cm	**
BODY LENGTH FROM CG TO REAR	-270.3 cm	**	-270.3 cm	**
BODY OVERALL WIDTH	178.1 cm		180.3 cm	
CRUSH STIFFNESSES:	A	B	A	B
	lb/in	lb/in^2	lb/in	lb/in^2
	373.4 **	37.7 **	173.3 **	57.1 **

Vehicle No. 1



CDC/PDOF: 01FDEW1 20.0 deg
Max Impact Force: 181270 N

Vehicle No. 2



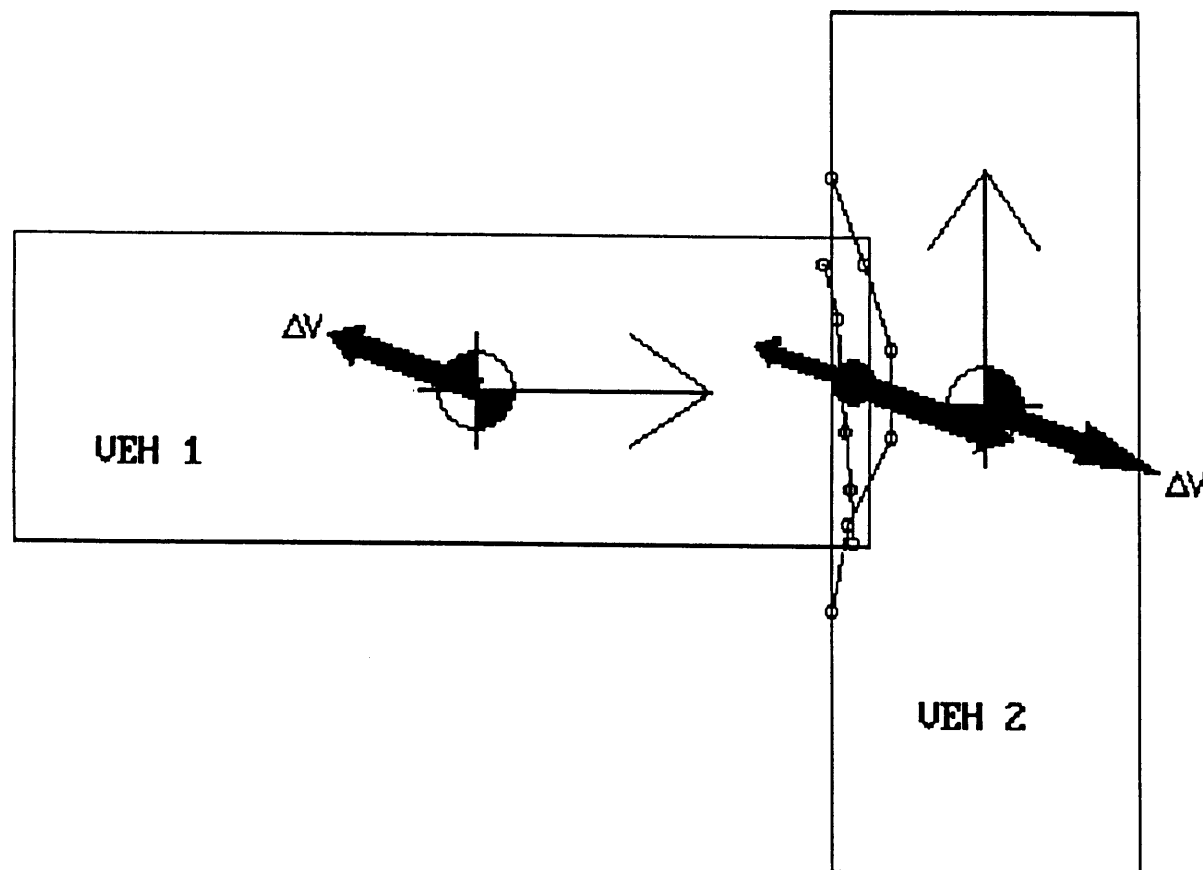
CDC/PDOF: 10LYEW3 -70.0 deg
Max Impact Force: 292494 N



EDCRASH
Damage Profiles

	Ueh #1	Ueh #2
Delta-U (km/h):		
X	-22.1	-9.6
Y	-8.1	26.3
Tot	23.6	28.0

Crush Data (cm):		
W	162.0	252.0
D	7.0	6.0
C1	26.0	0.0
C2	18.0	10.0
C3	17.0	35.0
C4	13.0	36.0
C5	11.0	19.0
C6	9.0	0.0



EDCRASH
At Impact

	Veh #1	Veh #2
Delta-U (km/h)		
(BASIS: Damage)		
X	-22.1	-9.6
Y	-8.1	26.3
Tot	23.6	28.0
PDOF	20.0	-70.0

UNITS: km/h,m,deg

(NO SCENE DATA)

TRC VECTOR ANALYSIS ITERATIONS

The TRC Vector Analysis program was used to determine the resultant theoretical Direction of Principal Force (PDOF) for both vehicles. Heading angles were determined from the scene evidence and weights were obtained from original specifications and interviewees. Based on our inspection of the each vehicle's crush, this contractor initially estimated the PDOFs as $+15 \pm 5$ degrees for the case vehicle and -75 ± 5 degrees for vehicle #2.

The driver of the case vehicle indicated in her interview that she was traveling about 56 k.p.h. (35 m.p.h.), below the posted SPEED LIMIT of 64 k.p.h. (40 m.p.h.), when she attempted to brake to avoid vehicle #2. This contractor believes that the case vehicle was most likely traveling 56-64 k.p.h. (35-40 m.p.h.) prior to impact. Because no pre-impact skidmarks were noted on the Police Accident Report, her speed at impact was most likely 48-56 k.p.h. (30-35 m.p.h.). Conflicting evidence exists regarding vehicle #2's speed at impact. The case vehicle driver indicated that vehicle #2 "stopped" in front of her after entering the intersection from the north leg; however, according to the driver of vehicle #2, she indicated that she attempted to accelerate upon seeing the case vehicle. Based on the crush and approximate final rest position of vehicle #2, the PDOF acting on vehicle #2 had to pass behind the center of gravity for the counterclockwise rotation to have occurred. In order to pass behind the center of gravity, the PDOF had to be more toward ten o'clock than nine o'clock. If vehicle #2 had been stopped or going very slow at impact, given the crush pattern, vehicle #2 should have rotated clockwise and moved west or west-northwest; however, it did not. Therefore, vehicle #2 must have been going at least 16 k.p.h. (10 m.p.h.).

Ten iterations of vehicle speeds are shown below: 40-64 k.p.h. (25-40 m.p.h.) for the case vehicle and 16-32 k.p.h. (10-20 m.p.h.) for vehicle #2. The program indicates that as vehicle #2's speed increases, the force collinearity vector rotates toward one and ten o'clock for the case vehicle and vehicle #2, respectively. Iterations two, three, six, and seven most closely match the observed vehicle dynamics. Therefore, after vehicle #2 entered the intersection, the speed at impact was most likely between 16-24 k.p.h. (10-15 m.p.h.). In accordance with NASS, CDS protocol, the PDOFs were assigned at $+20$ for the case vehicle and -70 for vehicle #2.

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	64 (40)	16 (10)		
Momentum	108800	22928		
PDOF (Degrees)	12	-78	91	STM
PDOF (Clock Direction)	12	9		
Theoretical Delta V	30.2	35.8		
Theoretical Common Vel.		35.5	Post-Crash CG Heading	258

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	56 (35)	16 (10)		
Momentum	95200	22928		
PDOF (Degrees)	14	-76	91	STM
PDOF (Clock Direction)	12	9		
Theoretical Delta V	26.6	31.6		
Theoretical Common Vel.		31.3	Post-Crash CG Heading	256

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	48 (30)	16 (10)		
Momentum	81600	22928		
PDOF (Degrees)	16	-74	491 91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	23.1	27.5		
Theoretical Common Vel.		27.1	Post-Crash CG Heading	254

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	40 (25)	16 (10)		
Momentum	68000	22928		
PDOF (Degrees)	19	-71	491 91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	19.7	23.4		
Theoretical Common Vel.		22.9	Post-Crash CG Heading	251

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	64 (40)	24 (15)		
Momentum	108800	34392		
PDOF (Degrees)	18	-72	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	31.3	37.1		
Theoretical Common Vel.		36.4	Post-Crash CG Heading	252

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	56 (35)	24 (15)		
Momentum	95200	34392		
PDOF (Degrees)	20	-70	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	27.9	33.1		
Theoretical Common Vel.		32.3	Post-Crash CG Heading	250

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	48 (30)	24 (15)		
Momentum	81600	34392		
PDOF (Degrees)	23	-67	91 91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	24.5	29.1		
Theoretical Common Vel.		28.3	Post-Crash CG Heading	247

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	64 (40)	32 (20)		
Momentum	108800	45856		
PDOF (Degrees)	23	-67	91 91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	32.7	38.8		
Theoretical Common Vel.		37.7	Post-Crash CG Heading	247

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	56 (35)	32 (20)		
Momentum	95200	45856		
PDOF (Degrees)	26	-64	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	29.5	35.0		
Theoretical Common Vel.		33.7	Post-Crash CG Heading	244

PDOF & Delta V Estimation From At Impact Heading Angles, Slip, and Momentum

Case Number: TRC/IU 95-17

Vehicle Numbers: 01 and 02

(Both Vehicles Must Be Tracking Or CRASH 3 Slip Angle(s) Estimated)

(Neither Vehicle May Be Backing)

(If The Back Of A Vehicle Is Involved, Its Speed Must Be Set To Zero)

(Some Configurations Involving Heavy Trucks Give Erroneous Results)

Vector Analysis Area	GV27(V01)	GV28(V02)		
Ln. Axis Heading Angle	270 (mph)	180 (mph)		
CG Heading Angle	270	180		
CRASH 3 Slip Angle	0	0		
Weight-Cargo	11	7		
Weight-Vehicle Curb Wt	1485	1374		
Weight-Passenger(s)	204	52		
Weight-Total	1700	1433		
Estimated Speed	48 (30)	32 (20)		
Momentum	81600	45856		
PDOF (Degrees)	29	-61	91	STM
PDOF (Clock Direction)	1	10		
Theoretical Delta V	26.4	31.3		
Theoretical Common Vel.		29.9	Post-Crash CG Heading	241

TRC VECTOR ANALYSIS PROGRAM

PDOF (Direction of Principal Force) is assigned based on the vehicular crush. Heading Angles are assigned based on scene evidence and Police Accident Reported crash configurations. This program was created to enable researchers in the NASS CDS to assess the compatibility of their assigned vehicle PDOFs and heading angles. When two vehicles are involved in an impact, researchers were often times submitting PDOFs that were not compatible with their heading angle assignments, indicating a lack of understanding of basic vector analysis concepts. Subsequently, the TRC has used this program to help verify our field PDOF assignments by making logical changes in the reconstructed crash configuration and determining the affect these changes have on PDOF.

Principal: This program is based on the geometric triangle rule (i.e., the sum of the three angles of a triangle must equal 180 degrees). The direction of one vehicle's (e.g., the case vehicle or Vehicle #1) CG (i.e., Center of Gravity) forms one side of the triangle. The direction of the other vehicle's (e.g., Vehicle #2) CG forms a second side of the triangle. The third side of the triangle is then formed by each vehicle's respective PDOF because the forces are assumed to act collinear.

Assumptions: It is assumed that each vehicle's weight can be represented by a *"point-mass"*. It is assumed that the vector force acting on each vehicle goes through the center of gravity (i.e., CG) of the vehicle. Further, it is assumed that the vehicles move off together joined as one object. This program does not take into affect the mass reduction that occurs in other reconstruction programs since its primary purpose is to check the compatibility of the field determined PDOF and Heading Angle.

Inputs: Heading Angle, Slip Angle (*"Yaw"*), Weights (Curb Weight, Cargo Weight, and Weight of all occupants), and Speed

Outputs: This program's primary output is each vehicle's theoretical PDOF, presented in both degrees and CDC clock directions. Other outputs include a theoretical Delta V and a theoretical Common Velocity. The theoretical Delta V shows the maximum Delta V for the given speeds and weights assuming a dead center impact. For special crash investigation purposes, the last two outputs should be essentially ignored.

Use: The TRC uses this program on nonaxial collisions involving two vehicles to vary the *"less established inputs"* in order to determine what theoretical affect these changes have on our field observed PDOFs. The most solid input is the weights of the respective vehicles. Even though the cargo weight is rarely accurately known, its order of magnitude is such that in the vast majority of crashes its affect is minor. The next solid inputs are the vehicle's heading angle and slip angle. In most cases these are fairly well known from the available physical evidence. The least solid input is the vehicle's speed. The submitted iterations show the inputs and what variations to those inputs that the TRC took into consideration. The PDOF outcomes are then compared with our field observed PDOF and adjustments are made, if necessary, in our final coding.

Purpose: This program is but one more tool in the hands of a researcher aimed at providing the best data.

Appendix C:

NASS CDS ACCIDENT FORM



U.S. Department of Transportation
National Highway Traffic Safety
Administration

ACCIDENT FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

2. Case Number - Stratum

9517

IDENTIFICATION

3. Number of General Vehicle
Forms Submitted

02

4. Date of Accident
(Month, Day, Year)

 / / 9 5

5. Time of Accident

Code reported military time of accident.

NOTE: Midnight = 2400
Unknown = 9999

SPECIAL STUDIES - INDICATORS

Check (✓) each special study (SS15-SS18 below) that has been completed; code 1 for the checked special studies and 0 for the special studies not checked.

6. SS15 Administrative Use

0

7. SS16 Pedestrian Crash Data Study
(Data for this special study available
in a separate file.)

0

8. SS17 Impact Fires

0

9. SS18 Unsafe Driver Actions

0

10. SS19

0

NUMBER OF EVENTS

11. Number of Recorded Events
in This Accident

01

Code the number of events which occurred
in this accident.

ACCIDENT EVENTS

For each event that occurred in the accident, code the lowest numbered vehicle in the left columns and the other involved vehicle or object in the right columns.

Accident Event Sequence Number	Vehicle Number	Class Of Vehicle	General Area of Damage	Vehicle Number or Object Contacted	Class Of Vehicle	General Area of Damage
12. <u>0 1</u>	13. <u>01</u>	14. <u>04</u>	15. <u>F</u>	16. <u>02</u>	17. <u>03</u>	18. <u>L</u>
19. <u>0 2</u>	20. <u> </u>	21. <u> </u>	22. <u> </u>	23. <u> </u>	24. <u> </u>	25. <u> </u>
26. <u>0 3</u>	27. <u> </u>	28. <u> </u>	29. <u> </u>	30. <u> </u>	31. <u> </u>	32. <u> </u>
33. <u>0 4</u>	34. <u> </u>	35. <u> </u>	36. <u> </u>	37. <u> </u>	38. <u> </u>	39. <u> </u>
40. <u>0 5</u>	41. <u> </u>	42. <u> </u>	43. <u> </u>	44. <u> </u>	45. <u> </u>	46. <u> </u>

IF GREATER THAN FIVE EVENTS, CONTINUE CODING ON THE ACCIDENT EVENT SUPPLEMENT

CODES FOR CLASS OF VEHICLE

- CV 110.4 → 280.4
- (00) Not a motor vehicle
- (01) Subcompact/mini (wheelbase < 254 cm)
- (02) Compact (wheelbase ≥ 254 but < 265 cm)
- (03) Intermediate (wheelbase ≥ 265 but < 278 cm)
- (04) Full size (wheelbase ≥ 278 but < 291 cm)
- (05) Largest (wheelbase ≥ 291 cm)
- (09) Unknown passenger car size VZ 105.6 → 268.2
- (14) Compact utility vehicle
- (15) Large utility vehicle (≤ 4,500 kgs GVWR)
- (16) Utility station wagon (≤ 4,500 kgs GVWR)
- (19) Unknown utility type
- (20) Minivan (≤ 4,500 kgs GVWR)
- (21) Large van (≤ 4,500 kgs GVWR)
- (24) Van Based school bus (≤ 4,500 kgs GVWR)
- (28) Other van type (≤ 4,500 kgs GVWR)
- (29) Unknown van type (≤ 4,500 kgs GVWR)
- (30) Compact pickup truck (≤ 4,500 kgs GVWR)
- (31) Large pickup truck (≤ 4,500 kgs GVWR)
- (38) Other pickup truck (≤ 4,500 kgs GVWR)
- (39) Unknown pickup truck type (≤ 4,500 kgs GVWR)
- (45) Other light truck (≤ 4,500 kgs GVWR)
- (48) Unknown light truck type (≤ 4,500 kgs GVWR)
- (49) Unknown light vehicle type
- (50) School bus (excludes van based) (> 4,500 kgs GVWR)
- (58) Other bus (> 4,500 kgs GVWR)
- (59) Unknown bus type
- (60) Truck (> 4,500 kgs GVWR)
- (67) Tractor without trailer
- (68) Tractor-trailer(s)
- (78) Unknown medium/heavy truck type
- (79) Unknown light/medium/heavy truck type
- (80) Motored cycle
- (90) Other vehicle
- (99) Unknown

CODES FOR GENERAL AREA OF DAMAGE (GAD)

- | | | | |
|---|-------------------------|----------------|-------------------|
| CDS APPLICABLE
AND OTHER
VEHICLES | (O) Not a motor vehicle | (R) Right side | (T) Top |
| | (N) Noncollision | (L) Left side | (U) Undercarriage |
| | (F) Front | (B) Back | (9) Unknown |
| | | | |
-
- | | | | |
|-------------------------------|-------------------------|---|-------------------------|
| TDC
APPLICABLE
VEHICLES | (O) Not a motor vehicle | (L) Left side | (C) Rear of cab |
| | (N) Noncollision | (B) Back of unit with cargo area
(rear of trailer or straight truck) | (V) Front of cargo area |
| | (F) Front | (D) Back (rear of tractor) | (T) Top |
| | (R) Right side | | (U) Undercarriage |
| | | | (9) Unknown |

CODES FOR VEHICLE NUMBER OR OBJECT CONTACTED

- (01-30) — Vehicle Number
- Noncollision
- (31) Overturn — rollover (excludes end-over-end)
- (32) Rollover — end-over-end
- (33) Fire or explosion
- (34) Jackknife
- (35) Other intraunit damage (specify): _____
- (36) Noncollision injury
- (38) Other noncollision (specify): _____
- (39) Noncollision — details unknown
- Collision With Fixed Object
- (41) Tree (≤ 10 cm in diameter)
- (42) Tree (> 10 cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment
- (45) Breakaway pole or post (any diameter)
- Nonbreakaway Pole or Post
- (50) Pole or post (≤ 10 cm in diameter)
- (51) Pole or post (> 10 cm but ≤ 30 cm in diameter)
- (52) Pole or post (> 30 cm in diameter)
- (53) Pole or post (diameter unknown)
- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail)
(specify): _____
- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): _____
- (69) Unknown fixed object
- Collision with Nonfixed Object
- (70) Passenger car, light truck, van, or other vehicle not in-transport
- (71) Medium/heavy truck or bus not in-transport
- (72) Pedestrian
- (73) Cyclist or cycle
- (74) Other nonmotorist or conveyance
- (75) Vehicle occupant
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (79) Object fell from vehicle in-transport
- (88) Other nonfixed object (specify): _____
- (89) Unknown nonfixed object
- (98) Other event (specify): _____
- (99) Unknown event or object

Appendix D:

NASS CDS VEHICLE FORMS: CASE VEHICLE



GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

VEHICLE IDENTIFICATION

4. Vehicle Model Year

Code the last two digits of the model year
(99) Unknown

5. Vehicle Make (specify):

ACURA
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(99) Unknown

6. Vehicle Model (specify):

VIGOR
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(999) Unknown

7. Body Type

Note: Applicable codes may be found on
the back of this page.

8. Vehicle Identification Number

JH4CC2664RC
Left justify; Slash zeros and letter Z (0 and Z)
No VIN—Code all zeros Unknown—Code all nines

9. Vehicle Special Use (This Trip)

- (0) No special use
(1) Taxi
(2) Vehicle used as school bus
(3) Vehicle used as other bus
(4) Military
(5) Police
(6) Ambulance
(7) Fire truck or car
(8) Other (specify):
(9) Unknown

OFFICIAL RECORDS

10. Police Reported Vehicle Disposition

- (0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

11. Police Reported Travel Speed

Code to the nearest kmph (NOTE: 000 means
less than 0.5 kmph)
(160) 159.5 kmph and above
(999) Unknown

___ mph X 1.6093 = ___ kmph

12. Speed Limit

(000) No statutory limit
Code posted or statutory speed limit
in kmph
(999) Unknown

40 mph X 1.6093 = 64 kmph

13. Police Reported Alcohol Presence For Driver

- (0) No alcohol present
(1) Yes alcohol present
(7) Not reported
(8) No driver present
(9) Unknown

14. Alcohol Test Result For Driver

Code actual value (decimal implied
before first digit—0.xx)
(95) Test refused
(96) None given
(97) AC test performed, results unknown
(98) No driver present
(99) Unknown

Source: PAR

15. Police Reported Other Drug Presence For Driver

- (0) No other drug(s) present
(1) Yes other drug(s) present
(7) Not reported
(8) No driver present
(9) Unknown

16. Other Drug Specimen Test Result For Driver

- (0) No specimen test given
(1) Drug(s) not found in specimen
(2) Drug(s) found in specimen, (specify):
(3) Specimen test given, results unknown or not
obtained
(8) No driver present
(9) Unknown if specimen test given

17. Driver's Zip Code

(00001) Driver not a resident of U.S. or territories
Code actual 5-digit zip code
(99998) No driver present
(99999) Unknown

18. Driver's Race/Ethnic Origin

- (1) White (non-Hispanic)
(2) Black (non-Hispanic)
(3) White (Hispanic)
(4) Black (Hispanic)
(5) American Indian, Eskimo or Aleut
(6) Asian or Pacific Islander
(7) Other (specify):

- (8) No driver present
(9) Unknown

CODES FOR BODY TYPE

CDS APPLICABLE VEHICLES

Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): _____
- (09) Unknown automobile type

Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

Utility Vehicles ($\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

Van Based Light Trucks ($\leq 4,500$ kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ($\leq 4,500$ kgs GVWR)
- (23) Van based motorhome ($\leq 4,500$ kgs GVWR)
- (24) Van based school bus ($\leq 4,500$ kgs GVWR)
- (25) Van based other bus ($\leq 4,500$ kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): _____
- (29) Unknown van type

Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

Other Light Trucks ($\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): _____
- (59) Unknown bus type

Medium/Heavy Trucks ($> 4,500$ kgs GVWR)

- (60) Step van ($> 4,500$ kgs GVWR)
- (61) Single unit straight truck ($4,500$ kgs $<$ GVWR $\leq 8,850$ kgs)
- (62) Single unit straight truck ($8,850$ kgs $<$ GVWR $\leq 12,000$ kgs)
- (63) Single unit straight truck ($> 12,000$ kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): _____
- (89) Unknown motored cycle type

Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2
 (0) Non-interchange area and non-junction
 (1) Interchange area related

Non-Interchange junctions

- (2) Intersection related
 (3) Driveway, alley access related
 (4) Other junction (specify) _____

(5) _____
 Unknown type of junction

(9) Unknown

20. Trafficway Flow 1
 (0) Not physically divided (two way traffic)
 (1) Divided trafficway-median strip without positive barrier
 (2) Divided trafficway-median strip with positive barrier
 (3) One way traffic
 (9) Unknown

21. Number Of Travel Lanes 4

- (1) One
 (2) Two
 (3) Three
 (4) Four
 (5) Five
 (6) Six
 (7) Seven or more
 (9) Unknown

22. Roadway Alignment 1

- (1) Straight
 (2) Curve right
 (3) Curve left
 (9) Unknown

23. Roadway Profile 1

- (1) Level
 (2) Uphill grade (>2%)
 (3) Hill crest
 (4) Downhill grade (>2%)
 (5) Sag
 (9) Unknown

24. Roadway Surface Type 2

- (1) Concrete
 (2) Bituminous (asphalt)
 (3) Brick or block
 (4) Slag, gravel, or stone
 (5) Dirt
 (8) Other (specify): _____
 (9) Unknown

25. Roadway Surface Condition 1

- (1) Dry
 (2) Wet
 (3) Snow or slush
 (4) Ice
 (5) Sand, dirt, or oil
 (8) Other (specify): _____
 (9) Unknown

26. Light Conditions 1

- (1) Daylight
 (2) Dark
 (3) Dark, but lighted
 (4) Dawn
 (5) Dusk
 (9) Unknown

27. Atmospheric Conditions 0

- (0) No adverse atmospheric-related driving conditions
 (1) Rain
 (2) Sleet/hail
 (3) Snow
 (4) Fog
 (5) Rain and fog
 (6) Sleet and fog
 (7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): _____
 (9) Unknown

28. Traffic Control Device 5

- (0) No traffic control(s)
 (1) Traffic control signal (not RR crossing)

Regulatory

- (2) Stop sign
 (3) Yield sign
 (4) School zone sign
 (5) Other regulatory sign (specify): SPEED LIMIT

- (6) Warning sign (not RR crossing)
 (7) Unknown sign
 (8) Miscellaneous/other controls including RR controls (specify): _____

(9) Unknown

29. Traffic Control Device Functioning 2

- (0) No traffic control device
 (1) Traffic control device not functioning (specify): _____
 (2) Traffic control device functioning properly
 (9) Unknown

PRECRASH DRIVER RELATED DATA**30. Driver's Distraction/Inattention To Driving** 03

(Prior To Recognition Of Critical Event)

- (00) No driver present
 (01) Attentive or not distracted
 (02) Looked but did not see

Distractions

- (03) By other occupant(s), (specify): Talking + listening another
 (04) By moving object in vehicle (specify): _____

- (05) While talking or listening to cellular phone
 (specify location and type of phone): _____

- (06) While dialing cellular phone (specify location
 and type of phone): _____

- (07) While adjusting climate controls
 (08) While adjusting radio, cassette, CD (specify): _____

- (09) While using other device/object in vehicle
 (specify): _____

- (10) Sleepy or fell asleep
 (11) Distracted by outside person, object, or event
 (specify): _____
 (12) Eating or drinking
 (13) Smoking related
 (97) Distracted/inattentive, details unknown
 (98) Other, distraction (specify): _____

- (99) Unknown

**31. Pre-Event Movement (Prior to
Recognition of Critical Event)** 01

- (00) No driver present
 (01) Going straight
 (02) Decelerating in traffic lane
 (03) Accelerating in traffic lane
 (04) Starting in traffic lane
 (05) Stopped in traffic lane
 (06) Passing or overtaking another vehicle
 (07) Disabled or parked in travel lane
 (08) Leaving a parking position
 (09) Entering a parking position
 (10) Turning right
 (11) Turning left
 (12) Making a U-turn
 (13) Backing up (other than for parking position)
 (14) Negotiating a curve
 (15) Changing lanes
 (16) Merging
 (17) Successful avoidance maneuver to a previous
 critical event
 (97) Other (specify): _____

- (99) Unknown

32. Critical Precrash Event 67*This Vehicle Loss of Control Due To:*

- (01) Blow out or flat tire
 (02) Stalled engine
 (03) Disabling vehicle failure (e.g., wheel fell off)
 (specify): _____
 (04) Non-disabling vehicle problem (e.g., hood flew
 up) (specify): _____
 (05) Poor road conditions (puddle, pot hole, ice, etc.)
 (specify): _____
 (06) Traveling too fast for conditions
 (08) Other cause of control loss (specify): _____
 (09) Unknown cause of control loss

This Vehicle Traveling

- (10) Over the lane line on left side of travel lane
 (11) Over the lane line on right side of travel lane
 (12) Off the edge of the road on the left side
 (13) Off the edge of the road on the right side
 (14) End departure
 (15) Turning left at intersection
 (16) Turning right at intersection
 (17) Crossing over (passing through) intersection
 (18) This vehicle decelerating
 (19) Unknown travel direction

Other Motor Vehicle In Lane

- (50) Other vehicle stopped
 (51) Traveling in same direction with lower steady
 speed
 (52) Traveling in same direction while decelerating
 (53) Traveling in same direction with higher speed
 (54) Traveling in opposite direction
 (55) In crossover
 (56) Backing
 (59) Unknown travel direction of other motor
 vehicle in lane

Other Motor Vehicle Encroaching Into Lane

- (60) From adjacent lane (same direction)—over left
 lane line
 (61) From adjacent lane (same direction)—over right
 lane line
 (62) From opposite direction—over left lane line
 (63) From opposite direction—over right lane line
 (64) From parking lane
 (65) From crossing street, turning into same
 direction
 (66) From crossing street, across path
 (67) From crossing street, turning into opposite
 direction
 (68) From crossing street, intended path not known
 (70) From driveway, turning into same direction
 (71) From driveway, across path
 (72) From driveway, turning into opposite direction
 (73) From driveway, intended path not known
 (74) From entrance to limited access highway
 (78) Encroachment by other vehicle—details
 unknown

Pedestrian, Pedalcyclist, or Other Nonmotorist

- (80) Pedestrian in roadway
 (81) Pedestrian approaching roadway
 (82) Pedestrian—unknown location
 (83) Pedalcyclist or other nonmotorist in roadway
 (specify): _____
 (84) Pedalcyclist or other nonmotorist approaching
 roadway, (specify): _____
 (85) Pedalcyclist or other nonmotorist—unknown
 location (specify): _____

Object or Animal

- (87) Animal in roadway
 (88) Animal approaching roadway
 (89) Animal—unknown location
 (90) Object in roadway
 (91) Object approaching roadway
 (92) Object—unknown location
 (98) Other critical precrash event (specify): _____
 (99) Unknown

33. Attempted Avoidance Maneuver 04

- (00) No driver present
- (01) No avoidance maneuver
- (02) Braking (no lockup)
- (03) Braking (lockup)
- (04) Braking (lockup unknown)
- (05) Releasing brakes
- (06) Steering left
- (07) Steering right
- (08) Braking and steering left
- (09) Braking and steering right
- (10) Accelerating
- (11) Accelerating and steering left
- (12) Accelerating and steering right
- (98) Other action (specify):

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify):

(9) Precrash stability unknown

35. Pre-Impact Location 1

- (0) No driver present
- (1) Stayed in original travel lane
- (2) Stayed on roadway but left original travel lane
- (3) Stayed on roadway, not known if left original travel lane
- (4) Departed roadway
- (5) Remained off roadway
- (6) Returned to roadway
- (7) Entered roadway
- (9) Unknown

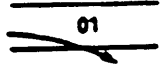








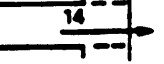
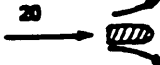
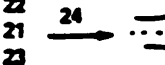
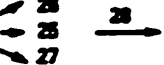
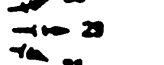
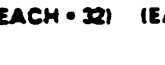
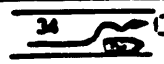

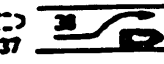

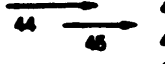

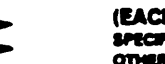












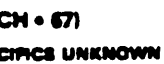

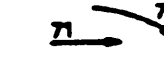
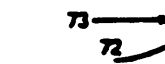

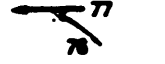


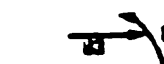
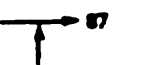

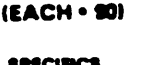
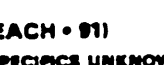
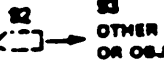

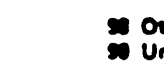

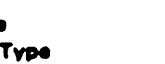
36. Accident Type 88

(Note: Applicable codes on back of this page)

- (00) No impact
Code the number of the diagram that best describes the accident circumstance
- (98) Other accident type (specify):

(99) Unknown

STOP HERE IF GV07 DOES NOT EQUAL 01 - 49

Category	Configuration	ACCIDENT TYPES (Includes Intent)				
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH., PED., ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH., PED., ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER 16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 22 SLOWER 24, 25, 27	 24 DECEL. 26, 28, 31	 26 SPECIFICS OTHER	 28 SPECIFICS UNKNOWN
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	(EACH - 32) SPECIFICS OTHER (EACH - 42) SPECIFICS UNKNOWN
	F Sideswipe Angle	 44 SPECIFICS OTHER	 46 SPECIFICS OTHER	 48 SPECIFICS OTHER	 50 SPECIFICS OTHER	(EACH - 48) SPECIFICS OTHER (EACH - 49) SPECIFICS UNKNOWN
III Same Trafficway Opposite Direction	G Head-On	 50 LATERAL MOVE	 52 SPECIFICS OTHER	 53 SPECIFICS OTHER	 54 SPECIFICS OTHER	(EACH - 52) SPECIFICS OTHER (EACH - 53) SPECIFICS UNKNOWN
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	(EACH - 54) SPECIFICS OTHER (EACH - 55) SPECIFICS UNKNOWN
	I Sideswipe Angle	 64 LATERAL MOVE	 66 SPECIFICS OTHER	 68 SPECIFICS OTHER	 70 SPECIFICS OTHER	(EACH - 64) SPECIFICS OTHER (EACH - 65) SPECIFICS UNKNOWN
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 70 INITIAL SAME DIRECTIONS	 72 SPECIFICS OTHER	 74 SPECIFICS OTHER	(EACH - 74) SPECIFICS OTHER (EACH - 75) SPECIFICS UNKNOWN
	K Turn Into Path	 76 TURN INTO SAME DIRECTION	 78 TURN INTO OPPOSITE DIRECTIONS	 80 SPECIFICS OTHER	 82 SPECIFICS OTHER	(EACH - 76) SPECIFICS OTHER (EACH - 77) SPECIFICS UNKNOWN
V Intersecting Paths (Vehicle Damage)	L Straight Paths	 86 SPECIFICS OTHER	 88 SPECIFICS OTHER	 90 SPECIFICS OTHER	 92 SPECIFICS OTHER	(EACH - 86) SPECIFICS OTHER (EACH - 87) SPECIFICS UNKNOWN
VI Miscellaneous	M Backing Etc	 92 BACKING VEH.	 94 OTHER VEH. OR OBJECT	 96 OTHER ACCIDENT TYPE	 98 UNKNOWN ACCIDENT TYPE	 100 NO IMPACT

OCCUPANT RELATED

37. Driver Presence in Vehicle 1
 (0) Driver not present
 (1) Driver present
 (9) Unknown
38. Number of Occupants This Vehicle 03
 (00-96) Code actual number of occupants for this vehicle
 (97) 97 or more
 (99) Unknown
39. Number of Occupant Forms Submitted 03

AIR BAG RELATED

40. Is this an AOPS Vehicle? 1
 (0) No (includes unknown)
 (1) Yes - researcher determined
 (2) VIN determined air bag system
 (3) VIN determined automatic (passive) belts
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal 6
 (0) Not equipped or not available
 (1) No air bags deployed
Single Air Bag Vehicle
 (2) Driver air bag deployed
 (3) Driver air bag, unknown if deployed
Multiple Air Bag Vehicle
 (4) Driver side only deployed
 (5) Passenger side only deployed
 (6) Driver and passenger side deployed
 (7) Driver and passenger side unknown if deployed
 (8) Air bag(s) deployed, details unknown
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal 0
 (0) Not equipped with an "other" air bag
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

Specify type of "other" air bag present: _____

VEHICLE WEIGHT ITEMS

43. Vehicle Curb Weight 1.480
 Code weight to nearest 10 kilograms.
 (045) Less than 450 kilograms
 (610) 6,100 kilograms or more
 (999) Unknown
3,273 lbs X .4536 = 1,484 kgs
 Source: '94 Brankoms shipping

Weight + 100 lbs

44. Vehicle Cargo Weight 0.010
 Code weight to nearest 10 kilograms.
 (000) Less than 5 kilograms
 (450) 4,500 kilograms or more
 (999) Unknown
25 lbs X .4536 = 11 kgs
 Source: DRIVER

ROLLOVER DATA

45. Rollover 00
 (00) No rollover (no overturning)
Rollover (primarily about the longitudinal axis)
 (01-16) Code the number of quarter turns Rollover, 17 or more quarter turns (specify): _____
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type 00
 (00) No rollover
 (01) Trip-over
 (02) Flip-over
 (03) Turn-over
 (04) Climb-over
 (05) Fall-over
 (06) Bounce-over
 (07) Collision with another vehicle
 (08) Other rollover initiation type specify): _____
 (98) Rollover--end-over-end
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation 0
 (0) No rollover
 (1) On roadway
 (2) On shoulder--paved
 (3) On shoulder--unpaved
 (4) On roadside or divided trafficway median
 (8) Rollover--end-over-end
 (9) Unknown
48. Rollover Initiation Object Contacted 00
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied 0
 (0) No rollover
 (1) Wheels/tires
 (2) Side plane
 (3) End plane
 (4) Undercarriage
 (5) Other location on vehicle (specify): _____
 (6) Non-contact rollover forces (specify): _____
 (8) Rollover--end-over-end
 (9) Unknown
50. Direction of Initial Roll 0
 (0) No rollover
 (1) Roll right - primarily about the longitudinal axis
 (2) Roll left - primarily about the longitudinal axis
 (8) Rollover--end-over-end
 (9) Unknown roll direction

OVERRIDE/UNDERRIDE (THIS VEHICLE)

51. Front Override/Underride (this Vehicle) 0
52. Rear Override/Underride (this Vehicle) 0
- (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride

*Override (see specific CDC)**(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49))*

- (1) 1st CDC
- (2) 2nd CDC
- (3) Other not automated CDC (specify): _____

*Underride (see specific CDC)**(Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49))*

- (4) 1st CDC
- (5) 2nd CDC
- (6) Other not automated CDC (specify): _____

- (7) Medium/heavy truck or bus override (of any configuration)
- (9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value

- (997) Noncollision
- (998) Impact with object
- (999) Unknown

53. Heading Angle For This Vehicle 270
54. Heading Angle For Other Vehicle 180

RECONSTRUCTION DATA

55. Towed Trailing Unit 0
- (0) No towed unit
- (1) Yes—towed trailing unit
- (9) Unknown
56. Documentation of Trajectory Data for This Vehicle 0
- (0) No
- (1) Yes
57. Post Collision Condition of Tree or Pole (For Highest Delta V) 0
- (0) Not collision (for highest delta V) with tree or pole
- (1) Not damaged
- (2) Cracked/sheared
- (3) Tilted <45 degrees
- (4) Tilted ≥45 degrees
- (5) Uprooted tree
- (6) Separated pole from base
- (7) Pole replaced
- (8) Other (specify): _____
- (9) Unknown

ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V

58. Basis for Total (Resultant) Delta V (highest) 01

(00) No vehicle inspection

Delta V Calculated

- (01) Reconstruction program -damage only routine
- (02) Reconstruction program -damage and trajectory routine
- (03) Missing vehicle algorithm

Delta V Not Calculated

- (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.

All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.

- (05) Rollover
- (06) Other non-horizontal forces
- (07) Sideswipe type damage
- (08) Severe override
- (09) Yielding object
- (10) Overlapping damage
- (11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify): _____

- (98) Other, (specify): _____

COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V

0 2 424 Nearest kmph (highest) Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)
 (160) 159.5 kmph and above
 (999) Unknown

60. Longitudinal Component of Delta V

Highest

⊕ 0 2 2- 22 Nearest kmph (highest) Nearest kmph (secondary)

(NOTE: 000 means greater than
 -0.5 kmph and less than +0.5 kmph)
 (±160) ±159.5 kmph and above
 (999) Unknown

61. Lateral Component of Delta V

Highest

⊕ 0 0 8- 8 Nearest kmph (highest) Nearest kmph (secondary)

(NOTE: 000 means greater than -0.5 kmph
 and less than +0.5 kmph)
 (±160) ±159.5 kmph and above
 (999) Unknown

62. Energy Absorption

0 3 9 . 5 0 039487 Nearest 100 joules (highest) Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)
 (9997) 999,650 joules or more
 (9999) Unknown

63. Impact Speed

Highest

9 9 8 Nearest kmph (highest) Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)
 (160) 159.5 kmph and above
 (998) Trajectory algorithm not run
 (999) Unknown

DELTA V CONFIDENCE LEVEL

64. Confidence in Reconstruction Program Results (For Highest Delta V)

1

- (0) No reconstruction
 (1) Collision fits model — results appear reasonable
 (2) Collision fits model — results appear high
 (3) Collision fits model — results appear low
 (4) Borderline reconstruction — results appear reasonable

OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed

Highest

0 2 123 Nearest kmph (highest) Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)
 (160) 159.5 kmph and above
 (999) Unknown

IS MISSING VEHICLE ALGORITHM APPLICABLE FOR THIS VEHICLE? ☐ YES ☒ NOIF YES: IS A COMPLETED PROGRAM SUMMARY INCLUDED? ☐ YES ☐ NO

ESTIMATED DELTA V	VEHICLE INSPECTION
<p>66. Estimated Highest Delta V (Researcher Determined) <u>0</u></p> <p>(0) Reconstruction Delta V coded</p> <p><i>Estimated Delta V</i></p> <p>(1) Less than 10 kmph</p> <p>(2) ≥ 10 kmph but < 25 kmph</p> <p>(3) ≥ 25 kmph but < 40 kmph</p> <p>(4) ≥ 40 kmph but < 55 kmph</p> <p>(5) ≥ 55 kmph</p> <p><i>Other estimates of damage severity</i></p> <p>(6) Minor</p> <p>(7) Moderate</p> <p>(8) Severe</p> <p>(9) Unknown</p>	<p>67. Type of Vehicle Inspection <u>1</u></p> <p>(0) No inspection</p> <p>(1) Vehicle fully repaired-no damage evident</p> <p>(2) Partial inspection (specify): _____</p> <p>(3) Complete inspection</p>

*** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67=0), ***

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

*** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE ***

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

EXTERIOR VEHICLE FORM

**NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM**

Administration	CRASHWORTHINESS DATA SYSTEM
1. Primary Sampling Unit Number <u>10</u>	3. Vehicle Number <u>01</u>
2. Case Number - Stratum <u>9517</u>	

VEHICLE IDENTIFICATION

VIN JH4CC2664RC _____ Model Year 94
Vehicle Make (specify): ACURA Vehicle Model (specify): VIGOR GS

LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L	Location of Max Crush
01	9cm in from LBC	ACROSS whole bumper	C-1

CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

[illegible]

ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase 110.4 inches x 2.54 = 280.4 cm
 Overall Length 190.4 inches x 2.54 = 483.6 cm
 Maximum Width 70.1 inches x 2.54 = 178 cm
 Curb Weight Auto News 3,142 pounds x 0.4536 = 1,425 kg
 Average Track 59.8 59.4 59.6 inches x 2.54 = 151.4 cm
 Front Overhang inches x 2.54 = 85 cm
 Rear Overhang inches x 2.54 = 116 cm
 Undeformed End Width inches x 2.54 = 162 cm
 Engine Size: cyl/displ. cc x 0.001 = 2.5 L
 I5 cylinders 150 CID x 0.0164 = L

5-passengers, 4 doors

Branham's Shipping Weight

1994 Acura Vigor GS

3,173 lbs 1,439 kg
 100
3,273 1,485 kg

SPECIAL CRASH INVESTIGATION ADDENDUM

Submodel Designation: {specify} GS Color: {specify} Black Repair Cost: \$

Transmission: {circle} Automatic | Manual Speed: 3-speed 4-speed 5-speed | Other:

Steering: {circle} Power-assisted | Manual Type: rack-and-pinion worm-and-gear | Other
{please describe}:

Brakes: {circle} Power-assisted | Manual Type: 4-wheel disc 4-wheel drum | 4-wheel hydraulic
front disc, rear drum | Other:

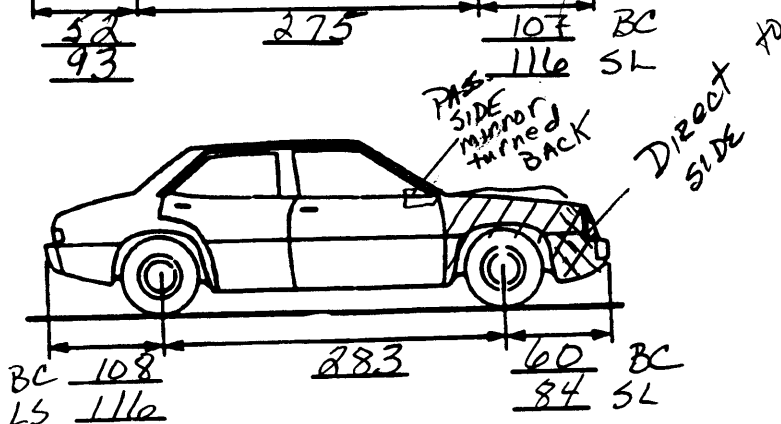
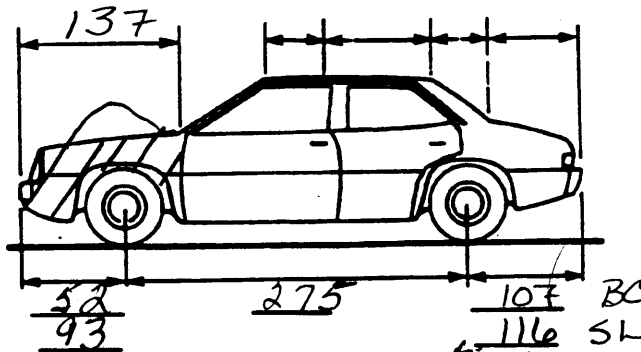
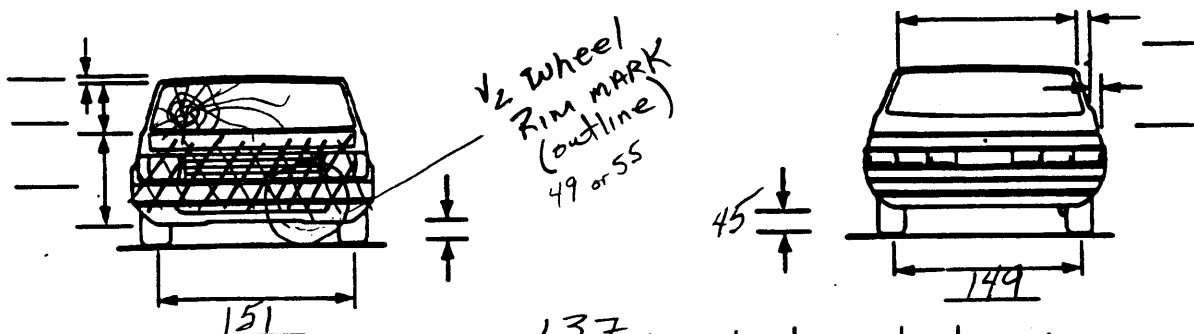
Observed Defects: {specify}

Fleet Type: {circle} Private vehicle | Rental vehicle | Leased vehicle | Commercial vehicle | Other
{please describe}:

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE a. Rotation physically restricted RF <u>2</u> LF <u>1</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		ORIGINAL SPECIFICATIONS Wheelbase <u>280</u> cm Overall Length <u>484</u> cm Maximum Width <u>178</u> cm Curb Weight <u>1425</u> kg Average Track <u>151</u> cm Front Overhang <u>85</u> cm Rear Overhang <u>116</u> cm Undeformed End Width <u>1162</u> cm Engine Size: cyl./displ. <u>5cyl/2.5</u> L		WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF ± _____ ° LF ± _____ ° RR ± _____ ° LR ± _____ ° Within ± 5 degrees
TYPE OF TRANSMISSION <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic END SHIFT ≥ 10 CM <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		DRIVE WHEELS <input checked="" type="checkbox"/> FWD <input type="checkbox"/> RWD <input type="checkbox"/> 4WD Approximate Cargo Weight _____ kg		

MEASUREMENTS IN CENTIMETERS



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

BRANHAM AUTOMOBILE REFERENCE BOOK-FOREIGN CAR SECTION

American HONDA Motor Co., ~~Tsukuba, Ibaraki, Japan~~ Ca 90501

Type of Body	Model	Wheel Base	Dimensions Inches Lt. x Wt. x Ht.	Ship. Wt. lb.	Tax H.P.	P.O.E. West Coast	P.O.E. East Coast
Man. trans. 5-speed; EPA Mileage Estimate 29/35							
2-PS 2-dr del Sol Si	EH616R	93.3"	157.3" x 66.7" x 49.4"	2351	13.92	16,450	16,450
5-PS 2-dr Coupe EX	EJ112R	103.2"	172.8" x 66.9" x 50.9"	2371	13.92	13,750	13,750
5-PS 2-dr Coupe EXA	EJ113R	103.2"	172.8" x 66.9" x 50.9"	2415	13.92	14,600	14,600
5-PS 3-dr Hatchback Si	EH338R	101.3"	160.2" x 66.9" x 50.7"	2327	13.92	13,300	13,300
5-PS 3-dr Hatchback SIA	EH339R	101.3"	160.2" x 66.9" x 50.7"	2371	13.92	14,150	14,150
5-PS 4-dr Sedan EX	EH959R	103.2"	173.0" x 66.9" x 51.7"	2459	13.92	15,920	15,920
Auto. Trans. 4-speed; EPA Mileage Estimate 26/33							
2-PS 2-dr del Sol Si	EH626R	93.3"	157.3" x 66.7" x 49.4"	2411	13.92	17,200	17,200
5-PS 2-dr Coupe EX	EJ122R	103.2"	172.8" x 66.9" x 50.9"	2439	13.92	14,500	14,500
5-PS 2-dr Coupe EXA	EJ123R	103.2"	172.8" x 66.9" x 50.9"	2483	13.92	15,350	15,350
5-PS 4-dr Sedan EX	EH969R	103.2"	173.0" x 66.9" x 51.7"	2512	13.92	16,670	16,670

1994 CIVIC FWD 4 cyl 1.5 liter SOHC PGMFI Gas Engine(8valve)

Bore & Stroke 2.95"x3.33"; Tax H.P. 13.92; Net H.P. 70@5000; Torque 91@2000; 91.1 cu.in., 1.5 liter

Man. Trans. 5-speed; EPA Mileage Estimate (49-state) 42/46 (CA) 40/45							
5-PS 3-dr Hatchback CX	EH235R	101.3"	160.2" x 66.9" x 50.7"	2051	13.92	9,500	9,500

1994 CIVIC FWD 4 cyl 1.5 liter SOHC PGMFI Gas Engine(16 valve)(VTEC-E)

Bore & Stroke 2.95"x3.33"; Tax H.P. 13.92; Net H.P. 92@5500; Torque 97@4500 91.1 cu.in., 1.5 liter

Man. Trans. 5-speed; EPA Mileage Estimate (49-state) 47/56 (CA) 44/51							
5-PS 3-dr Hatchback VX	EH237R	101.3"	160.2" x 66.9" x 50.7"	2043	13.92	11,620	11,620

1994 Civic FWD 4L cyl 1.6 liter DOHC PGMFI Gas Engine(16 valve)(VTEC)

Bore & Stroke 3.19"x3.05; Tax H.P. 16.28; SAE H.P. 160@7600; Torque 111@7000; 97 cu.in., 1.6 liter

Man. Trans. 5-speed; EPA Mileage Estimate 26/30							
2-PS 2-dr del Sol VTEC	EG217R	93.3"	157.3" x 66.7" x 49.4"	2428	16.28	17,900	17,900

1994 ACCORD FWD 4 cyl 2.2 liter SOHC PGMFI Gas Engine(16 valve)

Bore & Stroke 3.35"x3.75; Tax H.P. 17.96; SAE H.P. 130@5300; Torque 139@4200; 132 cu.in., 2.2 liter

Man. Trans. 5-speed; EPA Mileage Estimate 25/31 (Wagon 24/30)							
5-PS 4-dr Sedan DX	CD552R	106.9"	184.0" x 70.1" x 55.1"	2699	17.96	14,480	14,480
5-PS 4-dr Sedan DXA w/ABS	CD551R	106.9"	184.0" x 70.1" x 55.1"	2732	17.96	15,430	15,430
5-PS 4-dr Sedan LX	CD553R	106.9"	184.0" x 70.1" x 55.1"	2809	17.96	17,400	17,400
5-PS 4-dr Sedan LXA w/ABS	CD554R	106.9"	184.0" x 70.1" x 55.1"	2842	17.96	18,350	18,350
5-PS 2-dr Coupe DX	CD712R	106.9"	184.0" x 70.1" x 54.7"	2655	17.96	14,280	14,280
5-PS 2-dr Coupe DXA w/ABS	CD711R	106.9"	184.0" x 70.1" x 54.7"	2689	17.96	15,230	15,230
5-PS 2-dr Coupe LX	CD713R	106.9"	184.0" x 70.1" x 54.7"	2853	17.96	17,200	17,200
5-PS 2-dr Coupe LXA w/ABS	CD714R	106.9"	184.0" x 70.1" x 54.7"	2754	17.96	18,150	18,150
5-PS 5-dr Wagon LX	CE172R	106.9"	187.8" x 70.1" x 55.9"	2975	17.96	18,370	18,370
5-PS 5-dr Wagon LXA w/ABS	CE173R	106.9"	187.8" x 70.1" x 55.9"	3008	17.96	19,320	19,320
Auto. Trans. 4-speed; EPA Mileage Estimate 23/29 (Wagon 21/27)							
5-PS 4-dr Sedan DX	CD562R	106.9"	184.0" x 70.1" x 55.1"	2765	17.96	15,230	15,230
5-PS 4-dr Sedan DXA w/ABS	CD561R	106.9"	184.0" x 70.1" x 55.1"	2798	17.96	16,180	16,180
5-PS 4-dr Sedan LX	CD563R	106.9"	184.0" x 70.1" x 55.1"	2875	17.96	18,150	18,150
5-PS 4-dr Sedan LXA w/ABS	CD564R	106.9"	184.0" x 70.1" x 55.1"	2908	17.96	19,100	19,100
5-PS 2-dr Coupe DX	CD722R	106.9"	184.0" x 70.1" x 54.7"	2721	17.96	15,030	15,030
5-PS 2-dr Coupe DXA w/ABS	CD721R	106.9"	184.0" x 70.1" x 54.7"	2798	17.96	15,980	15,980
5-PS 2-dr Coupe LX	CD723R	106.9"	184.0" x 70.1" x 54.7"	2787	17.96	17,950	17,950
5-PS 2-dr Coupe LXA w/ABS	CD724R	106.9"	184.0" x 70.1" x 54.7"	2820	17.96	18,900	18,900
5-PS 5-dr Wagon LX	CE182R	106.9"	187.8" x 70.1" x 55.9"	3041	17.96	19,120	19,120
5-PS 5-dr Wagon LXA w/ABS	CE183R	106.9"	187.8" x 70.1" x 55.9"	3074	17.96	20,070	20,070

1994 ACCORD FWD 4 cyl 2.2 liter SOHC PGMFI Gas Engine(16 valve)(VTEC)

Bore & Stroke 3.35"x3.75; Tax H.P. 17.96; SAE H.P. 145@5500; Torque 147@4500; 132 cu.in., 2.2 liter

Man. Trans. 5-speed; EPA Mileage Estimate 25/31 (Wagon 25/31)							
5-PS 4-dr Sedan EX	CD555R	106.9"	184.0" x 70.1" x 55.1"	2908	17.96	19,950	19,950
5-PS 4-dr Sedan EXL w/Leather	CD556R	106.9"	184.0" x 70.1" x 55.1"	2908	17.96	21,000	21,000
5-PS 2-dr Coupe EX	CD715R	106.9"	184.0" x 70.1" x 54.7"	2853	17.96	19,750	19,750
5-PS 2-dr Coupe EXL w/Leather	CD716R	106.9"	184.0" x 70.1" x 54.7"	2853	17.96	20,800	20,800
5-PS 5-dr Wagon EX	CE179R	106.9"	187.8" x 70.1" x 55.9"	3041	17.96	20,970	20,970
Auto. Trans. 4-speed; EPA Mileage Estimate 23/30 (Wagon 23/29)							
5-PS 4-dr Sedan EX	CD565R	106.9"	184.0" x 70.1" x 55.1"	2974	17.96	20,700	20,700
5-PS 4-dr Sedan EXL w/Leather	CD566R	106.9"	184.0" x 70.1" x 55.1"	2974	17.96	21,750	21,750
5-PS 2-dr Coupe EX	CD725R	106.9"	184.0" x 70.1" x 54.7"	2919	17.96	20,500	20,500
5-PS 2-dr Coupe EXL w/Leather	CD726R	106.9"	184.0" x 70.1" x 54.7"	2919	17.96	21,500	21,500
5-PS 5-dr Wagon EX	CE189R	106.9"	187.8" x 70.1" x 55.9"	3096	17.96	21,720	21,720

1994 ACURA NSX RWD V6 cyl 3.0 liter DOHC VTEC PGMFI Gas Engine(24 valve)(VTEC)

Bore & Stroke 3.54"x3.07; Tax H.P. 30.08; SAE H.P. 270@7100; Torque 210@5300; 181 cu.in., 3.0 liter

BRANHAM AUTOMOBILE REFERENCE BOOK-FOREIGN CAR SECTION

American HONDA Motor Co., ~~Tsukuba, Ibaraki, Japan~~ Ca 90501

Type of Body	Model	Wheel Base	Dimensions Inches Lt. x Wt. x Ht.	Ship. Wt. lb.	Tax H.P.	P.O.E. West Coast	P.O.E. East Coast
Man. Trans 5-speed; EPA Mileage Estimate 19/24							
2-PS 2-dr Sport NSX	NA115R	99.6"	174.2" x 71.3" x 46.1"	2923	30.08	75,000	75,000
2-PS 2-dr Sport NSX	NA116R	99.6"	174.2" x 71.3" x 46.1"		30.08		
Bore & Stroke 3.54"x3.07; Tax H.P. 30.08; SAE H.P. 252@6500; Torque 210@5300; 181 cu.in., 3.0 liter							
Auto. Trans.; EPA Mileage Estimate 18/23							
2-PS 2-dr Sport NSX	NA125R	99.6"	174.2" x 71.3" x 46.1"		30.08		
2-PS 2-dr Sport NSX	NA126R	99.6"	174.2" x 71.3" x 46.1"	3012	30.08	79,000	79,000

1994 ACURA LEGEND FWD V6 cyl 3.2 liter; SOHC PGMFI Gas Engine(24 valve)

Bore & Stroke 3.54"x3.31"; Tax H.P. 30.08; SAE H.P. 200@5500; Torque 210@4500; 196 cu.in., 3.2 liter

Man. Trans. 5-speed; EPA Mileage Estimate 18/25							
5-PS 4-dr Sedan LC	KA755R	114.6"	194.9" x 71.3" x 55.1"	3410	30.08	34,160	34,160
5-PS 4-dr Sedan LL	KA756R	114.6"	194.9" x 71.3" x 55.1"	3410	30.08	35,660	35,660
Auto. Trans. 4-speed; EPA Mileage Estimate 19/24							
5-PS 4-dr Sedan LC	KA765R	114.6"	194.9" x 71.3" x 55.1"	3454	30.08	34,960	34,960
5-PS 4-dr Sedan LL	KA766R	114.6"	194.9" x 71.3" x 55.1"	3454	30.08	36,460	36,460
5-PS 4-dr Sedan LS	KA767R	114.6"	194.9" x 71.3" x 55.1"	3477	30.08	39,000	39,000

1994 ACURA LEGEND FWD V6 cyl 3.2 liter; SOHC PGMFI Gas Engine(24 valve)

Bore & Stroke 3.54"x3.31"; Tax H.P. 30.08; SAE H.P. 230@6200; Torque 206@4500; 196 cu.in., 3.2 liter

Man. Trans. 5-speed; EPA Mileage Estimate 18/26							
5-PS 4-dr Sedan GS	KA758R	114.6"	194.9" x 71.3" x 55.1"	3465	30.08	41,100	41,100
5-PS 2-dr Coupe L	KA816R	111.4"	192.5" x 71.3" x 53.7"	3411	30.08	38,100	38,100
5-PS 2-dr Coupe LS	KA817R	111.4"	192.5" x 71.3" x 53.7"	3433	30.08	41,900	41,900
Auto. Trans. 4-speed; EPA Mileage Estimate 18/23							
5-PS 4-dr Sedan GS	KA768R	114.6"	194.9" x 71.3" x 55.1"	3510	30.08	41,100	41,100
5-PS 2-dr Coupe L	KA826R	111.4"	192.5" x 71.3" x 53.7"	3455	30.08	38,100	38,100
5-PS 2-dr Coupe LS	KA827R	111.4"	192.5" x 71.3" x 53.7"	3477	30.08	41,900	41,900

1994 ACURA VIGOR FWD 5 cyl 2.5 liter SOHC PGMFI Gas Engine(20 valve)

Bore & Stroke 3.35"x3.41"; Tax H.P. 22.45; SAE H.P. 176@6300; Torque 170@3900; 150 cu.in., 2.5 liter

Man. Trans. 5-speed; EPA Mileage Estimate 20/27							
5-PS 4-dr Sedan LS	CC254R	110.4"	190.4" x 70.1" x 52.0"	3049	22.45	26,350	26,350
5-PS 4-dr Sedan GS	CC256R	110.4"	190.4" x 70.1" x 52.0"	3107	22.45	28,350	28,350
Auto. Trans. 4-speed; EPA Mileage Estimate 20/26							
5-PS 4-dr Sedan LS	CC264R	110.4"	190.4" x 70.1" x 52.0"	3111	22.45	27,100	27,100
5-PS 4-dr Sedan GS	CC266R	110.4"	190.4" x 70.1" x 52.0"	3173	22.45	29,100	29,100

1994 ACURA INTEGRA FWD 4 cyl 1.8 liter DOHC PGMFI Gas Engine(16 valve)

Bore & Stroke 3.19"x3.5"; Tax H.P. 16.28; SAE H.P. 142@6300; Torque 127@5200; 112 cu.in., 1.8 liter

Man. Trans. 5-speed; EPA Mileage Estimate 25/31							
4-PS 3-dr Coupe RS	DC434R	101.2"	172.4" x 67.3" x 50.8"	2458	16.28	14,980	14,980
4-PS 3-dr Coupe LS	DC435R	101.2"	172.4" x 67.3" x 50.8"	2572	16.28	17,650	17,650
5-PS 4-dr Sedan RS	DB754R	103.1"	178.1" x 67.3" x 52.1"	2552	16.28	15,740	15,740
5-PS 4-dr Sedan LS	DB755R	103.1"	178.1" x 67.3" x 52.1"	2632	16.28	17,650	17,650
Auto. Trans. 4-speed; EPA Mileage Estimate 24/31							
4-PS 3-dr Coupe RS	DC444R	101.2"	172.4" x 67.3" x 50.8"	2499	16.28	15,730	15,730
4-PS 3-dr Coupe LS	DC445R	101.2"	172.4" x 67.3" x 50.8"	2614	16.28	18,400	18,400
5-PS 4-dr Sedan RS	DB764R	103.1"	178.1" x 67.3" x 52.1"	2599	16.28	16,490	16,490
5-PS 4-dr Sedan LS	DB765R	103.1"	178.1" x 67.3" x 52.1"	2674	16.28	18,400	18,400

1994 ACURA INTEGRA FWD 4 cyl 1.8 liter DOHC PGMFI Gas Engine(16 valve)(VTEC)

Bore & Stroke 3.19"x3.43"; Tax H.P. 16.28; SAE H.P. 170@7600; Torque 128@6200; 109 cu.in., 1.8 liter

Man. Trans. 5-speed; EPA Mileage Estimate 25/31							
4-PS 3-dr Coupe VTEC GS-R	DC238R	101.2"	172.4" x 67.3" x 50.8"	2596	16.28	19,850	19,850
5-PS 4-dr Sedan GS-R	DB858R	103.1"	178.1" x 67.3" x 52.1"	2694	16.28	20,180	20,180

1994 PRELUDE SERIES FWD 4-cyl 2.2 liter SOHC PGMFI Gas Engine(16 valve)

Bore & Stroke 3.35"x3.74"; Tax H.P. 17.96; SAE H.P. 135@5200; Torque 142@4000; 132 cu.in., 2.2 liter

Man. Trans. 5-speed; EPA Mileage Estimate 24/29							
4-PS 2-dr Coupe S	BA814R	100.4"	174.8" x 69.5" x 50.8"	2672	17.96	18,450	18,450
Auto. Trans. 4-speed; EPA Mileage Estimate 23/28							
4-PS 2-dr Coupe S	BA824R	100.4"	174.8" x 69.5" x 50.8"	2725	17.96	19,200	19,200

1994 PRELUDE SERIES FWD 4-cyl 2.3 liter DOHC PGMFI Gas Engine(16 valve)

Bore & Stroke 3.42"x3.74"; Tax H.P. 18.71; SAE H.P. 160@5800; Torque 156@4500; 138 cu.in., 2.3 liter

Man. Trans. 5-speed; EPA Mileage Estimates 22/28							
4-PS 2-dr Coupe Si	BB215R	100.4"	174.8" x 69.5" x 50.8"	2773	18.71	21,850	21,850
4-PS 2-dr Coupe Si4WS	BB216R	100.4"	174.8" x 69.5" x 50.8"	2839	18.71	24,650	24,650
Auto. Trans. 4-speed; EPA Mileage Estimates 22/27							

COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>02</u>	6. <u>01</u>	7. <u>F</u>	8. <u>D</u>	9. <u>E</u>	10. <u>W</u>	11. <u>01</u>

Second Highest Delta "V"

12. _____	13. _____	14. _____	15. _____	16. _____	17. _____	18. _____	19. _____
-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------

CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

HIGHEST DELTA "V"

20. <u>L</u>	21. <u>C₁</u>	<u>C₂</u>	<u>C₃</u>	<u>C₄</u>	<u>C₅</u>	<u>C₆</u>	22. <u>±D</u>
<u>162</u>	<u>026</u>	<u>018</u>	<u>017</u>	<u>013</u>	<u>011</u>	<u>009</u>	<u>⊕ 007</u>

Second Highest Delta "V"

23. <u>L</u>	24. <u>C₁</u>	<u>C₂</u>	<u>C₃</u>	<u>C₄</u>	<u>C₅</u>	<u>C₆</u>	25. <u>±D</u>
_____	_____	_____	_____	_____	_____	_____	<u>+</u>
_____	_____	_____	_____	_____	_____	_____	<u>-</u>

26. Undeformed End Width
(Coded when highest severity impact is an end plane impact.) 162
_____ Code to the nearest centimeter
(250) 250 centimeters or more
(998) No highest severity end plane impact
(999) Unknown

27. Direct Damage Width
(For highest severity impact) 140
_____ Code to the nearest centimeter
(250) 250 centimeters or more
(999) Unknown

28. Original Wheelbase 280
_____ Code to the nearest centimeter
(650) 650 centimeters or more
(999) Unknown
_____ inches X 2.54 = _____ centimeters

29. Original Average Track Width 151
_____ Code to the nearest centimeter
(185) 185 centimeters or more
(999) Unknown
_____ inches X 2.54 = _____ centimeters

		FUEL SYSTEM	
30. Are CDCs Documented but Not Coded on The Automated File?	<u>0</u>	35. Location of Fuel Tank-1 Filler Cap	<u>2</u>
(0) No		36. Location of Fuel Tank-2 Filler Cap	<u>0</u>
(1) Yes		(0) No fuel tank	
		(1) On back plane	
		(2) Aft of center of the rear wheels (rear axle) on left side plane	
		(3) Aft of center of the rear wheels (rear axle) on right side plane	
		(4) Forward of center of the rear wheels (rear axle) on left side plane	
		(5) Forward of center of the rear wheels (rear axle) on right side plane	
		(6) Over the center of the rear wheels (rear axle) on left side plane	
		(7) Over the center of the rear wheels (rear axle) on right side plane	
		(8) Other (specify): _____	
		(9) Unknown	
31. Researcher's Assessment of Vehicle Disposition	<u>1</u>	37. Type of Fuel Tank-1	<u>1</u>
(0) Not towed due to vehicle damage		38. Type of Fuel Tank-2	<u>0</u>
(1) Towed due to vehicle damage		(0) No fuel tank (electrical vehicle)	
(9) Unknown		(1) Metallic	
		(2) Non-metallic	
		(9) Unknown	
32. Is This A Multi-Stage Manufactured Vehicle And/Or A Certified Altered Vehicle?	<u>0</u>	39. Location of Fuel Tank-1	<u>4</u>
(0) No post manufacturer modifications		40. Location of Fuel Tank-2	<u>0</u>
(1) Yes - post manufacturer modifications (specify): _____		(0) No fuel tank	
_____		(1) Aft of center of the rear wheels (rear axle) centered	
(Include photograph of CERTIFICATION PLACARD in case report)		(2) Aft of center of the rear wheels (rear axle) left side	
(9) Unknown if vehicle is modified		(3) Aft of center of the rear wheels (rear axle) right side	
		(4) Forward of center of the rear wheels (rear axle) centered	
		(5) Forward of center of the rear wheels (rear axle) left side	
		(6) Forward of center of the rear wheels (rear axle) right side	
		(7) Over center of the rear wheels (rear axle)	
		(8) Other (specify): _____	
		(9) Unknown	
		41. Damage to Fuel Tank-1	<u>1</u>
		42. Damage to Fuel Tank-2	<u>0</u>
		(0) No fuel tank	
		(1) No damage to fuel tank	
		(2) Deformed, no seam failure	
		(3) Deformed, with a seam failure	
		(4) Punctured	
		(5) Lacerated (ripped)	
		(6) Abraded (scraped)	
		(7) Filler neck separation from the fuel tank	
		(8) Other damage (specify): _____	
		(9) Unknown	
FIRE OCCURRENCE			
33. Fire Occurrence	<u>0</u>		
(0) No fire			
Yes, fire occurred			
(1) Minor			
(2) Major			
(9) Unknown			
34. Origin of Fire	<u>0</u>		
(0) No fire			
(1) Vehicle exterior (front, side, back, top)			
(2) Exhaust system			
(3) Fuel tank (and other fuel retention system parts)			
(4) Engine compartment			
(5) Cargo/trunk compartment			
(6) Instrument panel			
(7) Passenger compartment area			
(8) Other location (specify): _____			
(9) Unknown			

43. Leakage Location of Fuel System-1 144. Leakage Location of Fuel System-2 0

- (0) No fuel tank
(1) No fuel leakage

Primary Area Of Leakage

- (2) Tank
(3) Filler neck
(4) Cap
(5) Lines/pump/filter
(6) Vent/emission recovery
(8) Other (specify): _____
(9) Unknown

45. Fuel Type-1 0146. Fuel Type-2 00*Single Fuel Type*

- (00) No fuel tank
(01) Gasoline
(02) Diesel
(03) CNG (Compressed Natural Gas)
(04) LPG (Liquid Petroleum Gas) also known as Propane
(05) LNG (Liquid Natural Gas)
(06) Methanol (M100 or M85)
(07) Ethanol (E100 or E85)
(08) Other (Hydrogen or others) (specify): _____

Electric Powered or Electric/Solar Powered Vehicles

- (10) Lead Acid Battery
(11) Nickel-Iron Battery
(12) Nickel-Cadmium Battery
(13) Sodium Metal Chloride Battery
(14) Sodium Sulfur Battery
(18) Other (Specify): _____

(98) Other Hybrid (specify): _____

(99) Unknown fuel type

47. Is This Vehicle Equipped With More Than Two Fuel Tanks? 0

(0) No (one or two tanks only)

Yes - More Than Two Tanks

- (1) Yes -- no damage to any tank or filler cap and no fuel system leakage
(2) Yes -- no damage to any tank or filler cap but there is fuel system leakage (specify leakage location): _____
(3) Yes -- damage to an additional tank or filler cap and there is fuel system leakage (specify the following):
Type of tank _____
Tank location _____
Filler cap location _____
Tank damage _____
Location of leakage _____
Type of fuel _____
(9) Unknown if more than two tanks

COMMENTS

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED ***

(GV10=0)

DO NOT COMPLETE THE INTERIOR VEHICLE FORM.



U.S. Department of Transportation
National Highway Traffic Safety
Administration

INTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number 10

2. Case Number - Stratum 9517

3. Vehicle Number 01

INTEGRITY

4. Passenger Compartment Integrity 01

(00) No integrity loss

Yes, Integrity Was Lost Through

- (01) Windshield
- (02) Door (side)
- (03) Door/hatch (back door)
- (04) Roof
- (05) Roof glass
- (06) Side window
- (07) Rear window (backlight)
- (08) Roof and roof glass
- (09) Windshield and door (side)
- (10) Windshield and roof
- (11) Side and rear window (side window and backlight)
- (12) Windshield and side window
- (13) Door and side window
- (98) Other combination of above (specify):

(99) Unknown

Door, Tailgate or Hatch Opening

5. LF 1 6. RF 1 7. LR 1 8. RR 1 9. TG/H 0

- (0) No door/gate/hatch
- (1) Door/gate/hatch remained closed and operational
- (2) Door/gate/hatch came open during collision
- (3) Door/gate/hatch jammed shut
- (8) Other (specify):

(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 \neq 2, Then code 0

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

- (0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

- (1) Door operational (no damage)
- (2) Latch/striker failure due to damage
- (3) Hinge failure due to damage
- (4) Door structure failure due to damage
- (5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage
- (6) Latch/striker and hinge failure due to damage
- (8) Other failure (specify):

(9) Unknown

GLAZING

Type of Window/Windshield Glazing

15. WS 1 16. LF 4 17. RF 4 18. LR 4 19. RR 4
20. BL 4 21. Roof 3 22. Other 0

- (0) No glazing
- (1) AS-1 - Laminated
- (2) AS-2 - Tempered
- (3) AS-3 - Tempered-tinted (original)
- (4) AS-2 - Tempered-with after market tint
- (5) AS-3 - Tempered-tinted (with additional after market tint)
- (6) AS-14 - Glass/Plastic
- (7) Glazing removed prior to accident
- (8) Other (specify):

(9) Unknown

Window Precrash Glazing Status

23. WS 1 24. LF 3 25. RF 2 26. LR 2 27. RR 2
28. BL 1 29. Roof 2 30. Other 0

- (0) No glazing
- (1) Fixed
- (2) Closed
- (3) Partially opened
- (4) Fully opened
- (7) Glazing removed prior to accident
- (9) Unknown

Glazing Damage from Impact Forces

31. WS 9 32. LF 1 33. RF 1 34. LR 1 35. RR 1
36. BL 1 37. Roof 1 38. Other 0

- (0) No glazing
- (1) No glazing damage from impact forces
- (2) Glazing in place and cracked from impact forces
- (3) Glazing in place and holed from impact forces
- (4) Glazing out-of-place (cracked or not) and not holed from impact forces
- (5) Glazing out-of-place and holed from impact forces
- (6) Glazing disintegrated from impact forces
- (7) Glazing removed prior to accident
- (9) Unknown if damaged

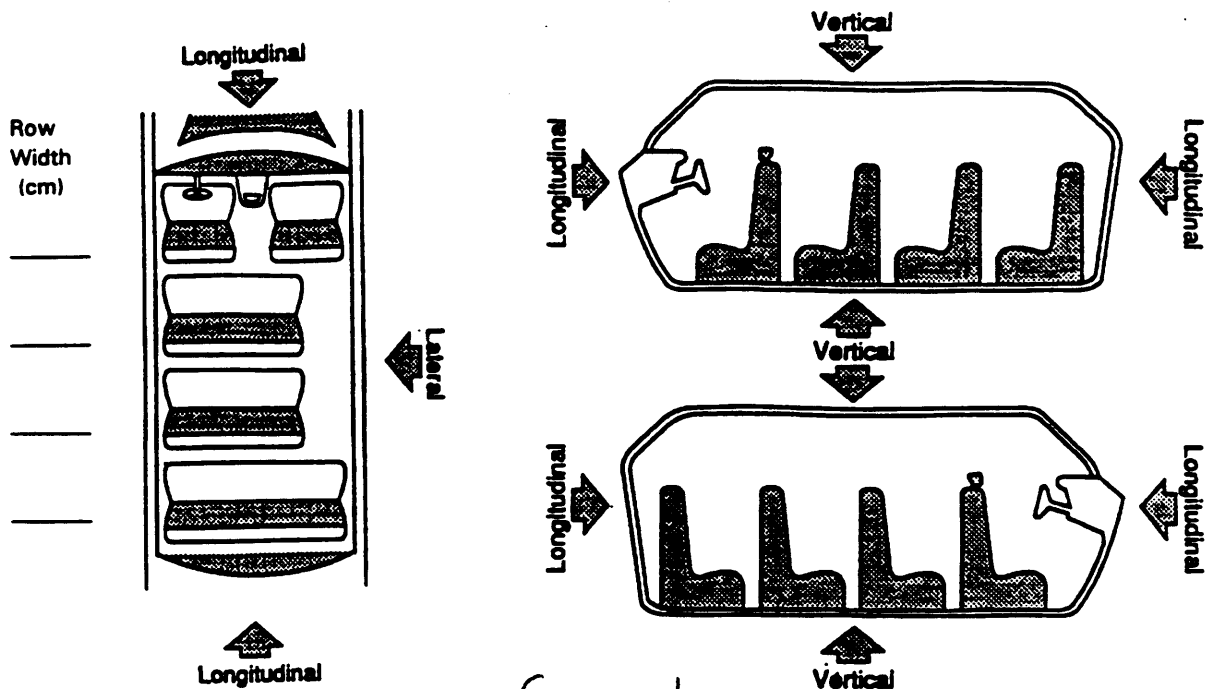
Glazing Damage from Occupant Contact

39. WS 4 40. LF 1 41. RF 1 42. LR 1 43. RR 1
44. BL 1 45. Roof 1 46. Other 0

- (0) No glazing
- (1) No occupant contact to glazing
- (2) Glazing contacted by occupant but no glazing damage
- (3) Glazing in place and cracked by occupant contact
- (4) Glazing in place and holed by occupant contact
- (5) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact
- (6) Glazing out-of-place by occupant contact and holed by occupant contact
- (7) Glazing removed prior to accident
- (8) Glazing disintegrated by occupant contact
- (9) Unknown if contacted by occupant

INTRUSION WORKSHEET

Note: Sketch intruded areas



NO EVIDENCE OF INTRUSION

LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are In Centimeters)			INTRUSION	DOMINANT CRUSH DIRECTION
		COMPARISON VALUE	INTRUDED VALUE	=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		
		-		=		

Document no more than the 15 most severe intrusions

OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47. _____	48. _____	49. _____	50. _____
2nd	51. _____	52. _____	53. _____	54. _____
3rd	55. _____	56. _____	57. _____	58. _____
4th	59. _____	60. _____	61. _____	62. _____
5th	63. _____	64. _____	65. _____	66. _____
6th	67. _____	68. _____	69. _____	70. _____
7th	71. _____	72. _____	73. _____	74. _____
8th	75. _____	76. _____	77. _____	78. _____
9th	79. _____	80. _____	81. _____	82. _____
10th	83. _____	84. _____	85. _____	86. _____

LOCATION OF INTRUSION

Front Seat
 (11) Left
 (12) Middle
 (13) Right

Second Seat
 (21) Left
 (22) Middle
 (23) Right

Third Seat
 (31) Left
 (32) Middle
 (33) Right

Fourth Seat
 (41) Left
 (42) Middle
 (43) Right

(97) Catastrophic
 (98) Other enclosed area (specify)

(99) Unknown

INTRUDING COMPONENT

Interior Components

- (01) Steering assembly
- (02) Instrument panel left
- (03) Instrument panel center
- (04) Instrument panel right
- (05) Toe pan
- (06) A (A1/A2)-pillar
- (07) B-pillar
- (08) C-pillar
- (09) D-pillar
- (10) Side panel - forward of the A1/A2-pillar
- (11) Door panel (side)
- (12) Side panel - rear of the B-pillar
- (13) Roof (or convertible top)
- (14) Roof side rail
- (15) Windshield
- (16) Windshield header
- (17) Window frame
- (18) Floor pan (includes sill)
- (19) Backlight header
- (20) Front seat back
- (21) Second seat back
- (22) Third seat back
- (23) Fourth seat back
- (24) Fifth seat back
- (25) Seat cushion
- (26) Back door/panel (e.g., tailgate)
- (27) Other interior component (specify): _____

Exterior Components

- (30) Hood
- (31) Outside surface of this vehicle (specify): _____
- (32) Other exterior object in the environment (specify): _____
- (33) Unknown exterior object
- (97) Catastrophic
- (98) Intrusion of unlisted component(s) (specify): _____
- (99) Unknown

MAGNITUDE OF INTRUSION

- (1) ≥ 3 centimeters but < 8 centimeters
- (2) ≥ 8 centimeters but < 15 centimeters
- (3) ≥ 15 centimeters but < 30 centimeters
- (4) ≥ 30 centimeters but < 46 centimeters
- (5) ≥ 46 centimeters but < 61 centimeters
- (6) ≥ 61 centimeters
- (7) Catastrophic
- (9) Unknown

DOMINANT CRUSH DIRECTION

- (1) Vertical
- (2) Longitudinal
- (3) Lateral
- (7) Catastrophic
- (9) Unknown

STEERING RIM/SPOKE DEFORMATION

(All Measurements Are in Centimeters)

COMPARISON VALUE	—	DAMAGE VALUE	=	DEFORMATION
------------------	---	--------------	---	-------------

	—		=	
--	---	--	---	--

	—		=	
--	---	--	---	--

No DEFORMATION

	—		=	
--	---	--	---	--

STEERING COLUMN

INSTRUMENT PANEL

87. Steering Column Type 2

- (1) Fixed column
 (2) Tilt column
 (3) Telescoping column
 (4) Tilt and telescoping column
 (8) Other column type (specify): _____

(9) Unknown

88. Tilt Steering Column Adjustment 1

- (0) No tilt steering column
 (1) Full up
 (2) Between full up and center
 (3) Center
 (4) Between center and full down
 (5) Full down
 (9) Unknown

89. Telescoping Steering Column Adjustment 0

- (0) No telescoping steering column
 (1) Full back
 (2) Between full back and midpoint
 (3) Midpoint
 (4) Between midpoint and full forward
 (5) Full forward
 (9) Unknown

90. Steering Rim/Spoke Deformation 00

- Code actual measured deformation to the nearest centimeter
 (00) No steering rim deformation
 (01-14) Actual measured value in centimeters
 (15) 15 centimeters or more
 (98) Observed deformation cannot be measured
 (99) Unknown

91. Location of Steering Rim/Spoke Deformation 00

(00) No steering rim deformation

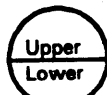
Quarter Sections

- (01) Section A
 (02) Section B
 (03) Section C
 (04) Section D



Half Sections

- (05) Upper half of rim/spoke
 (06) Lower half of rim/spoke
 (07) Left half of rim/spoke
 (08) Right half of rim/spoke



- (09) Complete steering wheel collapse
 (10) Undetermined location
 (99) Unknown

92. Odometer Reading 023,000

_____ kilometers

Code to the nearest 1,000 kilometers

(000) No odometer

(001) Less than 1,500 kilometers

(500) 499,500 kilometers or more

(999) Unknown

14.245 miles X 1.6093 = 22925 kilometersSource: ODOMETER93. Instrument Panel Damage from Occupant Contact? 1

(0) No

(1) Yes

(9) Unknown

94. Type of Knee Bolster Covering 1

(0) No knee bolster

(1) Padded

(2) Rigid plastic

(8) Other (specify): _____

(9) Unknown

95. Knee Bolsters Deformed from Occupant Contact? 1

(0) No knee bolster

(1) No deformation

(2) Yes - deformation

(9) Unknown

96. Did Glove Compartment Door Open During Collision(s)? 1

(0) No glove compartment door

(1) No - door did not open

(2) Yes - door opened

(9) Unknown

97. Adaptive (Assistive) Driving Equipment 0

(0) No adaptive driving equipment

(1) Adaptive driving equipment installed

(Check all that apply.)

[] Hand controls for braking/acceleration

[] Steering control devices (attached to OEM steering wheel)

[] Steering knob attached to steering wheel

[] Low effort power steering (unit or device)

[] Replacement steering wheel (i.e., reduced diameter)

[] Joy-stick steering controls

[] Wheelchair tie-downs

[] Modification to seat belts (specify): _____

[] Additional or relocated switches (specify): _____

[] Raised roof

[] Wall-mounted head rest (used behind wheelchair)

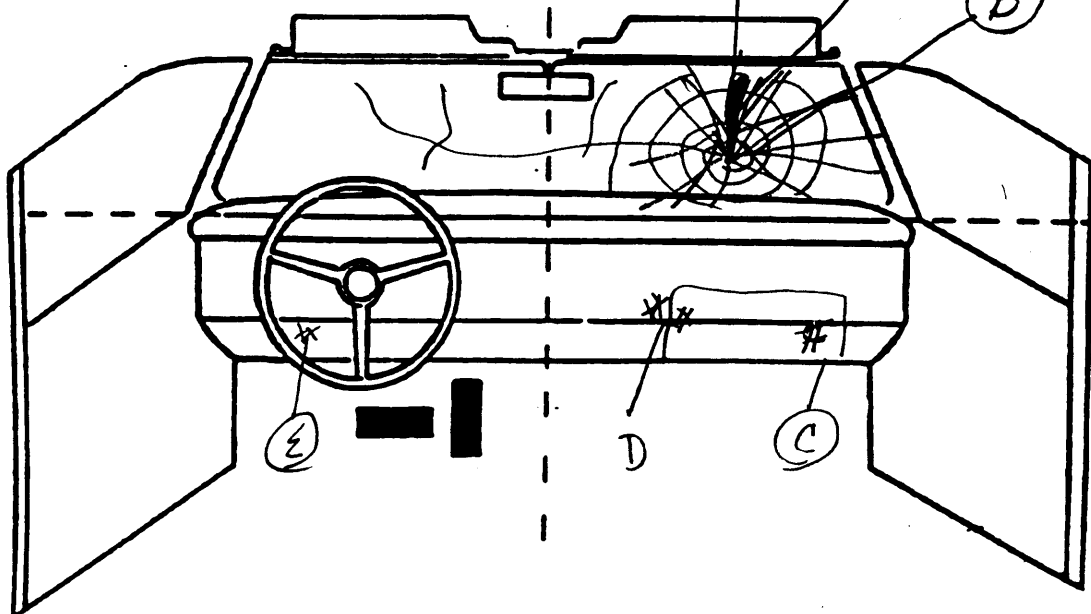
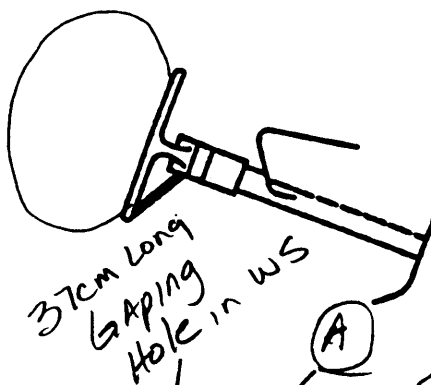
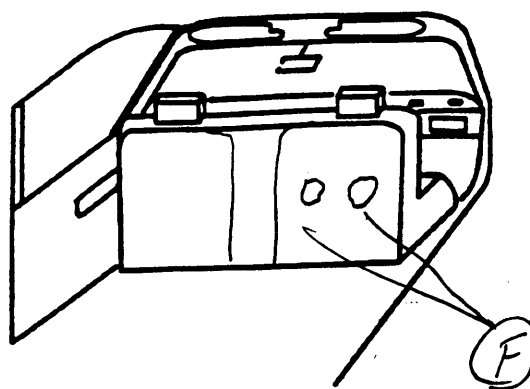
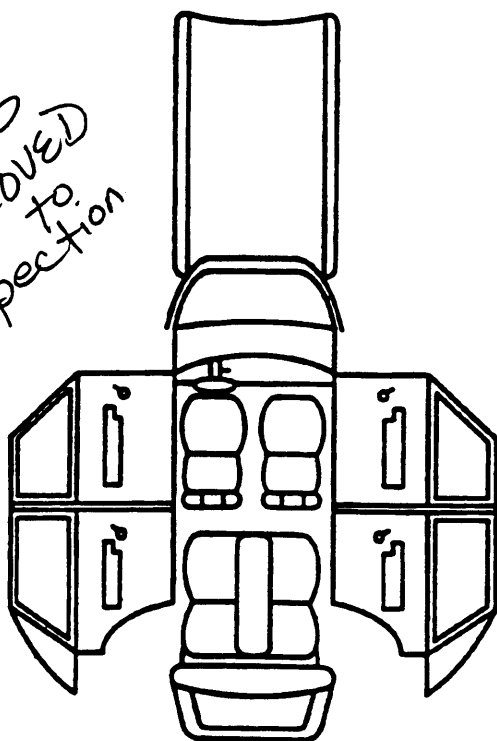
[] Other adaptive device (specify): _____

(9) Unknown

VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment

Both
AIR
BAGS
REMOVED
PRIOR
to
inspection



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).
Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.
Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	001	02	HEAD	Spider web	1
B	001			PASS AIR bag comp cover	N/A
C	013	02	Knee	Knee scuff	3
D	013	02	Knee	Knee BLACK TRANSFER	3
E	014	01	Knee	Scuff/Abrasion	1
F	151	03	Knees	scuffs	1
G					
H					
I					
J					
K					
L					
M					
N					

CODES FOR INTERIOR COMPONENTS

FRONT

- (001) Windshield
 (002) Mirror
 (003) Sunvisor
 (004) Steering wheel rim
 (005) Steering wheel hub/spoke
 (006) Steering wheel (combination of codes 004 and 005)
 (007) Steering column, transmission selector lever, other attachment
 (008) Cellular telephone or CB radio
 (009) Add on equipment (e.g., tape deck, air conditioner)
 (010) Left instrument panel and below
 (011) Center instrument panel and below
 (012) Right instrument panel and below
 (013) Glove compartment door
 (014) Knee bolster
 (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
 (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
 (017) Windshield reinforced by exterior object, (specify):
 (019) Other front object (specify):

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
 (052) Left side hardware or armrest
 (053) Left A (A1/A2)-pillar
 (054) Left B-pillar
 (055) Other left pillar (specify):
 (056) Left side window glass
 (057) Left side window frame
 (058) Left side window sill
 (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
 (060) Other left side object (specify):

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests
 (102) Right side hardware or armrest
 (103) Right A (A1/A2)-pillar
 (104) Right B-pillar
 (105) Other right pillar (specify):
 (106) Right side window glass
 (107) Right side window frame
 (108) Right side window sill
 (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
 (110) Other right side object (specify):

INTERIOR

- (151) Seat, back support
 (152) Belt restraint webbing/buckle
 (153) Belt restraint B-pillar or door frame attachment point
 (154) Other restraint system component (specify):
 (155) Head restraint system
 (160) Other occupants (specify):
 (161) Interior loose objects
 (162) Child safety seat (specify):
 (163) Other interior object (specify):

AIR BAG

- (170) Air bag-driver side
 (175) Air bag compartment cover-driver side
 (180) Air bag-passenger side
 (185) Air bag compartment cover-passenger side
 (190) Other air bag (specify)
 (195) Other air bag compartment cover (specify)

ROOF

- (201) Front header
 (202) Rear header
 (203) Roof left side rail
 (204) Roof right side rail
 (205) Roof or convertible top

FLOOR

- (251) Floor (including toe pan)
 (252) Floor or console mounted transmission lever, including console
 (253) Parking brake handle
 (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
 (302) Backlight storage rack, door, etc.
 (303) Other rear object (specify):

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
 (402) Steering control devices (attached to OEM steering wheel)
 (403) Steering knob attached to steering wheel
 (405) Replacement steering wheel (i.e., reduced diameter)
 (406) Joy stick steering controls
 (407) Wheelchair tie-downs
 (408) Modification to seat belts, (specify):
 (409) Additional or relocated switches, (specify):
 (410) Raised roof
 (411) Wall mounted head rest (used behind wheel chair)
 (412) Other adaptive device (specify):

CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
 (2) Probable
 (3) Possible
 (9) Unknown

MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	0	4
	Evidence of usage	04		04
	Used in this crash?	04		00
	Proper Use	1		0
	Failure Modes	41		0
	Anchorage Adjustment	41		2
SECOND	Availability	4	3	4
	Evidence of usage	04	00	04
	Used in this crash?			
	Proper Use			
	Failure Modes			
	Anchorage Adjustment	1		1
OTHER	Availability			
	Evidence of usage			
	Used in this crash?			
	Proper Use			
	Failure Modes			
	Anchorage Adjustment			

Manual (Active) Belt System Availability

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify): _____
- (9) Unknown

Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify): _____
- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown
- (08) Other belt used (specify): _____

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat type unknown
- (18) Other belt used with child safety seat (specify): _____
- (99) Unknown if belt used

Proper Use of Manual (Active) Belts

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____
- (8) Other improper use of manual belt system (specify): _____
- (9) Unknown

Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify): _____
- (8) Other manual belt failure (specify): _____
- (9) Unknown

Shoulder Belt Upper Anchorage Adjustment

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

AUTOMATIC RESTRAINTS

NOTES: Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

AIR BAGS

		Left Front	Right Front	Other
F I R S T	Availability/Function	1	1	
	Deployment	1	1	
	Failure	1	2	

Air Bag System Availability/Function

(0) Not equipped/not available

(1) Air bag

Non-functional

(2) Air bag disconnected (specify): _____

(3) Air bag not reinstalled

(9) Unknown

Are There Indications of Air Bag System Failure? (This Occupant Position)

(0) Not equipped/not available

(1) No

(2) Yes (specify): _____

(9) Unknown

Frontal Air Bag System Deployment

(This Occupant Position)

(0) Not equipped/not available

(1) Deployed during accident (as a result of impact)

(2) Deployed inadvertently just prior to accident

(3) Deployed, accident sequence undetermined

(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)

(5) Unknown if deployed

(7) Nondeployed

(9) Unknown

Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position)

(0) Not equipped with an "other" air bag

(1) Deployed during accident (as a result of impact)

(2) Deployed inadvertently just prior to accident

(3) Deployed, details unknown

(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)

(5) Unknown if deployed

(7) Nondeployed

(9) Unknown

AUTOMATIC BELTS

		Left	Right
F I R S T	Availability/Function	0	0
	Use	0	0
	Type	0	0
	Proper Use	0	0
	Failure Modes	0	0

Automatic (Passive) Belt System Availability/Function

(0) Not equipped/not available

(1) 2 point automatic belts

(2) 3 point automatic belts

(3) Automatic belts - type unknown

Non-functional

(4) Automatic belts destroyed or rendered inoperative

(9) Unknown

Automatic (Passive) Belt System Use

(0) Not equipped/not available/destroyed or rendered inoperative

(1) Automatic belt in use

(2) Automatic belt not in use (manually disconnected, motorized track inoperative)

(3) Automatic belt use unknown

(9) Unknown

Automatic (Passive) Belt System Type

(0) Not equipped/not available

(1) Non-motorized system

(2) Motorized system

(9) Unknown

Proper Use of Automatic (Passive) Belt System

(0) Not equipped/not available/not used

(1) Automatic belt used properly

(2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

(3) Automatic shoulder belt worn under arm

(4) Automatic shoulder belt worn behind back

(5) Automatic belt worn around more than one person

(6) Lap portion of automatic belt worn on abdomen

(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of automatic belt system (specify): _____

(9) Unknown

Automatic (Passive) Belt Failure Modes During Accident

(0) Not equipped/not available/not in use

(1) No automatic belt failure(s)

(2) Torn webbing (stretched webbing not included)

(3) Broken buckle or latchplate

(4) Upper anchorage separated

(5) Other anchorage separated (specify): _____

(6) Broken retractor

(7) Combination of above (specify): _____

(8) Other automatic belt failure (specify): _____

(9) Unknown

FIRST SEAT FRONTAL AIR BAGS

NOTES: Encode the applicable data for the driver and first seat passenger in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

	Driver	Passenger
Type of air bag?	1	1
Flaps open at tear points?	2	2
Flaps damaged?	1	1
Air bag damaged?	01	04, 07
Source of air bag damage	01	88
Air bag tethered?	1	1
Air bag have vent ports?	2	2
Other occupant contact air bag?	1	1
Occupant wearing eyewear?	9	9

Type of Air Bag

- (0) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Retrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

Did Air Bag Module Cover Flap(s) Open At Designated Tear Points?

- (0) Not equipped/not available
- (1) No
- (2) Yes
- (3) Deployed, unknown if flap(s) opened at designated tear points
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Were Air Bag Module Cover Flap(s) Damaged?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was There Damage To The Air Bag?

- (00) Not equipped/not available
- (01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
- (03) Cut
- (04) Torn
- (05) Holed
- (06) Burned
- (07) Abraded
- (88) Other damage (specify):

- (95) Damaged, details unknown
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Source of Air Bag Damage

- (00) Not equipped/not available
- (01) Not damaged
- (02) Object worn by occupant, (specify):
- (03) Object carried by occupant, (specify):
- (04) Adaptive/assistive controls, (specify):
- (05) Fire in vehicle
- (06) Thermal burns
- (07) Rescue or emergency efforts
- (88) Other damage source (specify):
BRACKET SCREWS
- (95) Damaged, unknown source
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Was The Air Bag Tethered?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of tether straps):
- (3) Deployed, unknown if tethered
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Did The Air Bag Have Vent Ports?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of vent ports):
2
- (3) Deployed, unknown if vent ports present
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was the Air Bag in this Occupant's Position Contacted by Another Occupant?

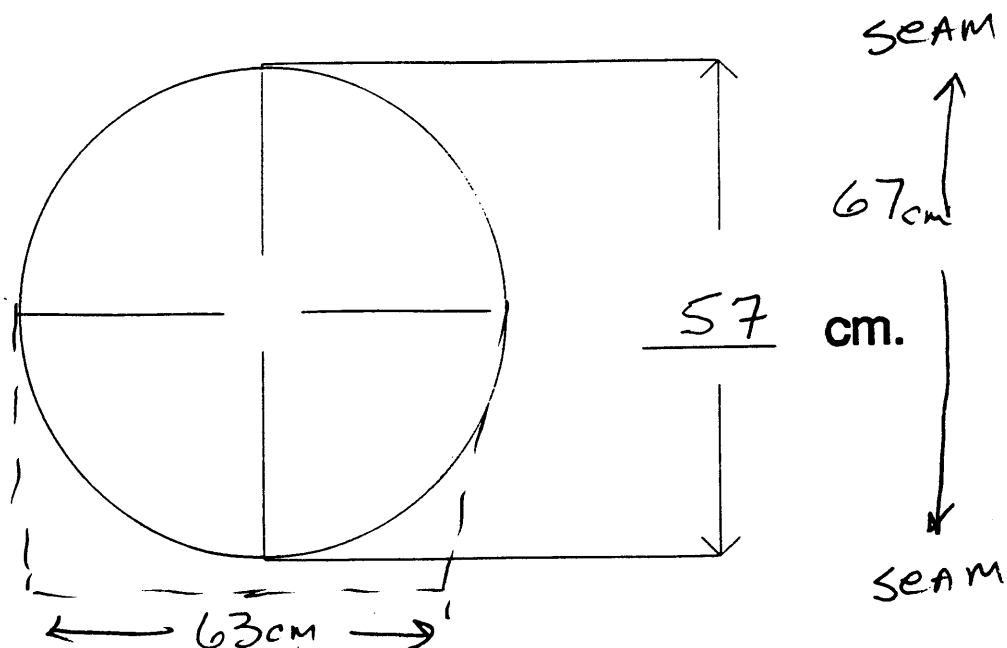
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if other occupant contact to air bag
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was This Occupant Wearing Eye-wear?

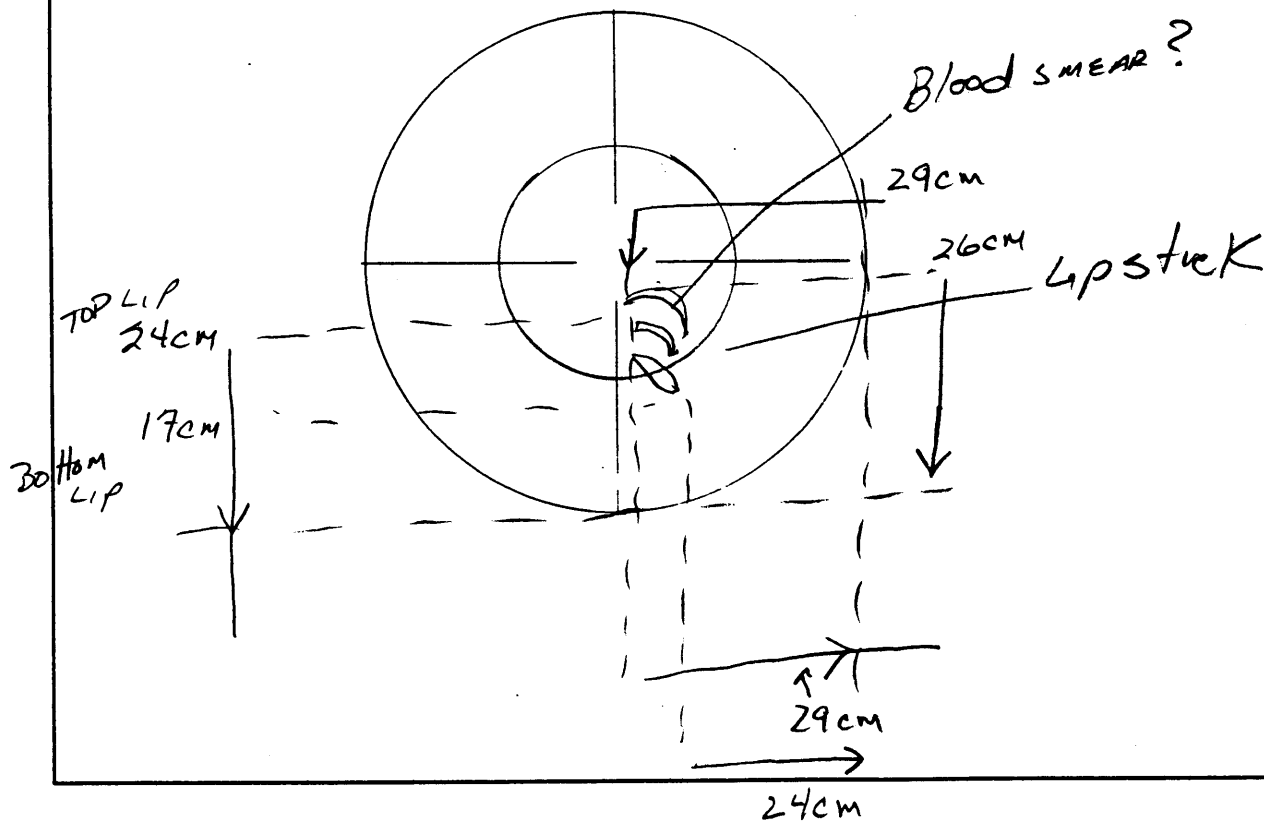
- (0) Not equipped/not available
- (1) No
- (2) Eyeglasses/sunglasses
- (3) Contact lenses
- (4) Deployed, unknown if eyewear worn
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

DRIVER AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Front)

ACCORDIAN
FOLDING
PATTERN

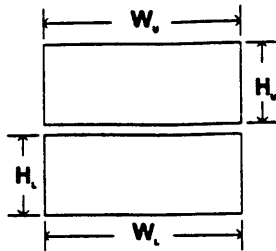
2. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Back)



DRIVER AIR BAG SKETCHES (Cont'd)

3. DRIVER AIR BAG MODULE COVER FLAP SIZE. (DOUBLE)

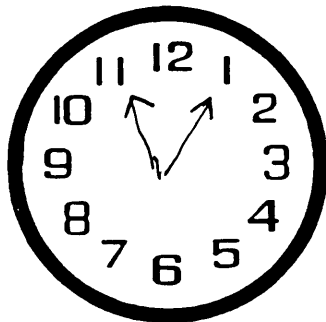
a. Upper Flap b. Lower Flap
width (W_U) 14 1/2 cm width (W_L) _____
height (H_U) 13 1/2 cm height (H_L) _____



4. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE

5. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS

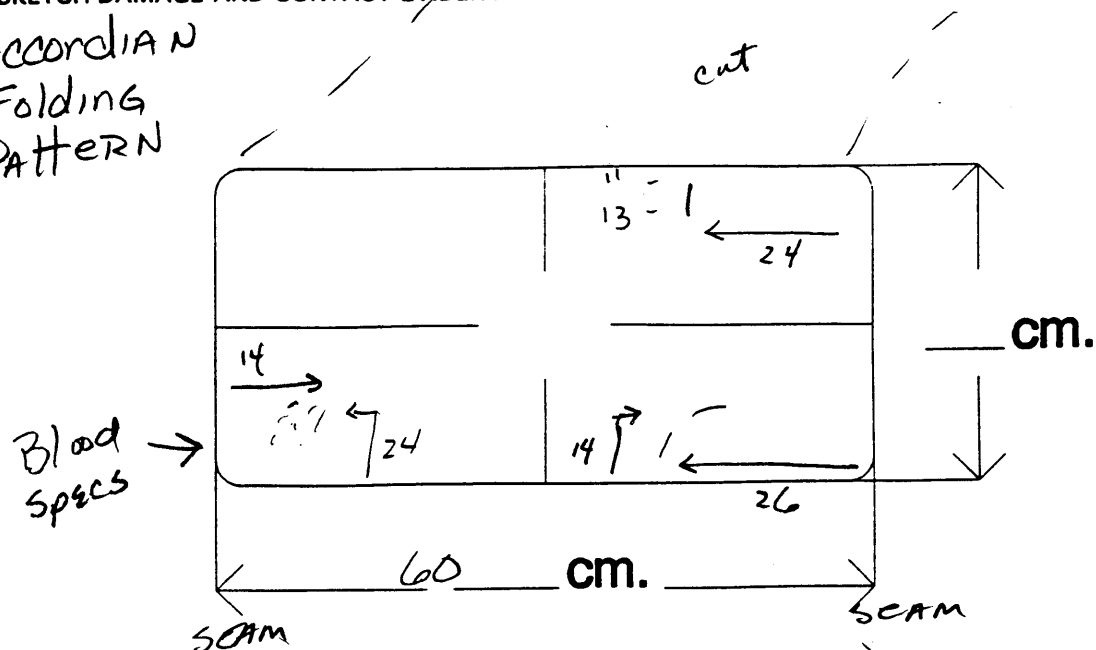
6. SKETCH LOCATION OF CIRCULAR AIR BAG VENT PORTS



Exhaust +
Hole DIAM.
3cm

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Front)

Accordian Folding Pattern



crease
line
also

-CREASE
LINE
A/SO

43

40cm

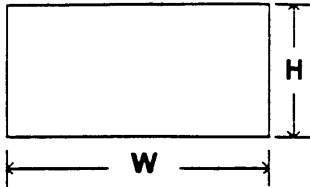
PASSENGER AIR BAG SKETCHES (Cont'd)

3. PASSENGER AIR BAG MODULE COVER FLAP SIZE (SINGLE)

a. Flap

width (W) 35

height (H) 14



4. PASSENGER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)

a. Upper Flap

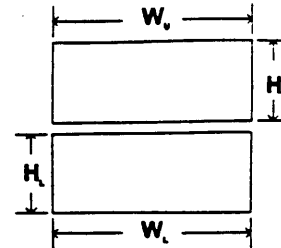
b. Lower Flap

width (W_u) _____

width (W_l) _____

height (H_u) _____

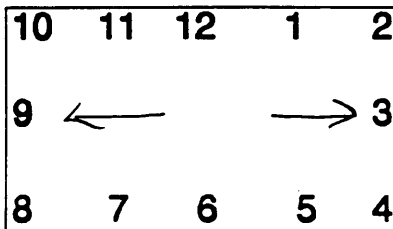
height (H_l) _____



5. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE

6. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS

7. SKETCH LOCATION OF RECTANGULAR AIR BAG VENT PORTS



Ho/e
Diam
g/cm

"OTHER" AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Front)

2. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Back)

"OTHER" AIR BAG SKETCHES (Cont'd)

3. SKETCH AIR BAG MODULE FLAP AND SIZE OR OPENING FOR AIRBAG

4. SKETCH AIR BAG VENT PORTS

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
F I R S T	Head Restraint Type/Damage	3		3
	Seat Type	02		02
	Seat Performance	1		1
	Seat Orientation	1		1
	Seat Track Position	6		5
	Seat Back Incline Pre/Post Impact	23		23
S E C O N D	Head Restraint Type/Damage	3		3
	Seat Type	03	03	03
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
	Seat Track Position	1	1	1
	Seat Back Incline Pre/Post Impact	01	01	01
T H I R D	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			
O T H E R	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE
(I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

HEAD RESTRAINTS/SEAT EVALUATION

Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other
Specify: _____
- (9) Unknown

Seat Type (this Occupant Position)

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): _____
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

Seat Performance (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed (specify): _____
- (4) Seat tracks/anchors failed
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): _____
- (7) Combination of above (specify): _____
- (8) Other (specify): _____
- (9) Unknown

Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): _____
- (9) Unknown

Seat Track Adjusted Position Prior To Impact

- (0) Occupant not seated or no seat
- (1) Non-adjustable seat track

Adjustable Seat Track

- (2) Seat at forward most track position
- (3) Seat between forward most and middle track positions
- (4) Seat at middle track position
- (5) Seat between middle and rear most track positions
- (6) Seat at rear most track position
- (9) Unknown

Seat Back Incline Prior and Post Impact

- (00) Occupant not seated or no seat
- (01) Not adjustable

Upright prior to impact

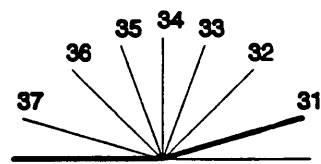
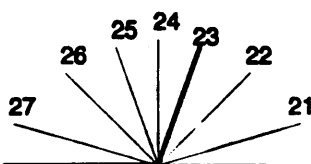
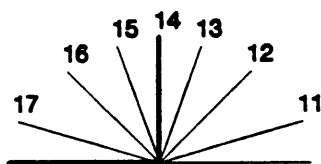
- (11) Moved to completely rearward position
- (12) Moved to rearward midrange position
- (13) Moved to slightly rearward position
- (14) Retained pre-impact position
- (15) Moved to slightly forward position
- (16) Moved to forward midrange position
- (17) Moved to completely forward position

Slightly reclined prior to impact

- (21) Moved to completely rearward position
- (22) Moved to rearward midrange position
- (23) Retained pre-impact position
- (24) Moved to upright position
- (25) Moved to slightly forward position
- (26) Moved to forward midrange position
- (27) Moved to completely forward position

Completely reclined prior to impact

- (31) Retained pre-impact position
- (32) Moved to rearward midrange position
- (33) Moved to slightly rearward position
- (34) Moved to upright position
- (35) Moved to slightly forward position
- (36) Moved to forward midrange position
- (37) Moved to completely forward position
- (99) Unknown



Coding diagrams for Seat Back Incline Position Prior and Post Impact

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE
(I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

EJECTION No ☒ Yes ☐

Describe indications of ejection and body parts involved in partial ejection(s):

Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

Ejection

- (1) Complete ejection
(2) Partial ejection
(3) Ejection, Unknown degree
(9) Unknown

Ejection Area

- (1) Windshield
(2) Left front
(3) Right front
(4) Left rear
(5) Right rear
(6) Rear

(7) Roof

- (8) Other area (e.g., back of pickup, etc.) (specify):

(9) Unknown**Ejection Medium**

- (1) Door/hatch/tailgate
(2) Nonfixed roof structure
(3) Fixed glazing
(4) Nonfixed glazing (specify):

(5) Integral structure

- (8) Other medium (specify):

(9) Unknown**Medium Status (Immediately Prior to Impact)**

- (1) Open
(2) Closed
(3) Integral structure
(9) Unknown

ENTRAPMENT No ☒ Yes ☐

Describe entrapment mechanism: _____

Component(s): _____

(Note in vehicle interior diagram)

CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

1. Type of Child Safety Seat

- (0) No child safety seat
- (1) Infant seat
- (2) Toddler seat
- (3) Convertible seat
- (4) Booster seat
- (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

2. Child Safety Seat Orientation

- (00) No child safety seat
- Designed for Rear Facing for This Age/Weight
- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):

- (09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

- (19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

- (29) Unknown orientation

- (99) Unknown if child safety seat used

3. Child Safety Seat Harness Usage

4. Child Safety Seat Shield Usage

5. Child Safety Seat Tether Usage

Note: Options Below Are Used for Variables 3-5.

- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

- (99) Unknown if child safety seat used

6. Child Safety Seat Make/Model

(Specify make/model and occupant number)

Appendix E:

NASS CDS VEHICLE FORMS: VEHICLE #2



GENERAL VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

VEHICLE IDENTIFICATION

4. Vehicle Model Year

Code the last two digits of the model year
(99) Unknown

5. Vehicle Make (specify):

FORD
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(99) Unknown

6. Vehicle Model (specify):

LTD
Applicable codes are found in your
NASS Data Collection, Coding and
Editing Manual.
(99) Unknown

7. Body Type

Note: Applicable codes may be found on
the back of this page.

8. Vehicle Identification Number

LEABP393XFG
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
Left justify; Slash zeros and letter Z (0 and-Z)
No VIN—Code all zeros Unknown—Code all nines

9. Vehicle Special Use (This Trip)

- (0) No special use
(1) Taxi
(2) Vehicle used as school bus
(3) Vehicle used as other bus
(4) Military
(5) Police
(6) Ambulance
(7) Fire truck or car
(8) Other (specify):
(9) Unknown

OFFICIAL RECORDS

10. Police Reported Vehicle Disposition

- (0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

11. Police Reported Travel Speed

Code to the nearest kmph (NOTE: 000 means
less than 0.5 kmph)
(160) 159.5 kmph and above
(999) Unknown

____ mph X 1.6093 = ____ kmph

12. Speed Limit

(000) No statutory limit
Code posted or statutory speed limit
in kmph
(999) Unknown

30 mph X 1.6093 = 48 kmph

13. Police Reported Alcohol Presence For Driver

- (0) No alcohol present
(1) Yes alcohol present
(7) Not reported
(8) No driver present
(9) Unknown

14. Alcohol Test Result For Driver

Code actual value (decimal implied
before first digit—0.xx)
(95) Test refused
(96) None given
(97) AC test performed, results unknown
(98) No driver present
(99) Unknown

Source:

15. Police Reported Other Drug Presence For Driver

- (0) No other drug(s) present
(1) Yes other drug(s) present
(7) Not reported
(8) No driver present
(9) Unknown

16. Other Drug Specimen Test Result For Driver

- (0) No specimen test given
(1) Drug(s) not found in specimen
(2) Drug(s) found in specimen, (specify):
(3) Specimen test given, results unknown or not
obtained
(8) No driver present
(9) Unknown if specimen test given

17. Driver's Zip Code

(00001) Driver not a resident of U.S. or territories
Code actual 5-digit zip code
(99998) No driver present
(99999) Unknown

18. Driver's Race/Ethnic Origin

- (1) White (non-Hispanic)
(2) Black (non-Hispanic)
(3) White (Hispanic)
(4) Black (Hispanic)
(5) American Indian, Eskimo or Aleut
(6) Asian or Pacific Islander
(7) Other (specify):

- (8) No driver present
(9) Unknown

CODES FOR BODY TYPE

CDS APPLICABLE VEHICLES

Automobiles

- (01) Convertible (excludes sun-roof, t-bar)
- (02) 2-door sedan, hardtop, coupe
- (03) 3-door/2-door hatchback
- (04) 4-door sedan, hardtop
- (05) 5-door/4-door hatchback
- (06) Station wagon (excluding van and truck based)
- (07) Hatchback, number of doors unknown
- (08) Other automobile type (specify): _____
- (09) Unknown automobile type

Automobile Derivatives

- (10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
- (11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
- (12) Large limousine - more than four side doors or stretched chassis
- (13) Three-wheel automobile or automobile derivative

Utility Vehicles ($\leq 4,500$ kgs GVWR)

- (14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Passport, Samurai, Sidekick, Rocky)
- (15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Hummer, Landcruiser, Rover, Scout, Yukon)
- (16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
- (19) Utility, unknown body type

Van Based Light Trucks ($\leq 4,500$ kgs GVWR)

- (20) Minivan (Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Vista, Aerostar, Windstar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Expo Wagon, Vanagon/Camper.)
- (21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
- (22) Step van or walk-in van ($\leq 4,500$ kgs GVWR)
- (23) Van based motorhome ($\leq 4,500$ kgs GVWR)
- (24) Van based school bus ($\leq 4,500$ kgs GVWR)
- (25) Van based other bus ($\leq 4,500$ kgs GVWR)
- (28) Other van type (Hi-Cube Van, Kary) (specify): _____
- (29) Unknown van type

Light Conventional Trucks (Pickup style cab, $\leq 4,500$ kgs GVWR)

- (30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10, T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
- (31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500, T100)

- (32) Pickup with slide-in camper
- (33) Convertible pickup
- (39) Unknown pickup style light conventional truck type

Other Light Trucks ($\leq 4,500$ kgs GVWR)

- (40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
- (41) Truck based panel
- (42) Light truck based motorhome (chassis mounted)
- (45) Other light conventional truck type
- (48) Unknown light truck type
- (49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

- (50) School bus (designed to carry students, not cross country or transit)
- (58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify): _____
- (59) Unknown bus type

Medium/Heavy Trucks ($> 4,500$ kgs GVWR)

- (60) Step van ($> 4,500$ kgs GVWR)
- (61) Single unit straight truck ($4,500$ kgs $<$ GVWR $\leq 8,850$ kgs)
- (62) Single unit straight truck ($8,850$ kgs $<$ GVWR $\leq 12,000$ kgs)
- (63) Single unit straight truck ($> 12,000$ kgs GVWR)
- (64) Single unit straight truck, GVWR unknown
- (65) Medium/heavy truck based motorhome
- (67) Truck-tractor with no cargo trailer
- (68) Truck-tractor pulling one trailer
- (69) Truck-tractor pulling two or more trailers
- (70) Truck-tractor (unknown if pulling trailer)
- (78) Unknown medium/heavy truck type
- (79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

- (80) Motorcycle
- (81) Moped (motorized bicycle)
- (82) Three-wheel motorcycle or moped
- (88) Other motored cycle (minibike, motorscooter) (specify): _____
- (89) Unknown motored cycle type

Other Vehicles

- (90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
- (91) Snowmobile
- (92) Farm equipment other than trucks
- (93) Construction equipment other than trucks
- (97) Other vehicle type
- (99) Unknown body type

PRECRASH ENVIRONMENTAL DATA

19. Relation To Interchange Or Junction 2
 (0) Non-interchange area and non-junction
 (1) Interchange area related

Non-Interchange junctions

- (2) Intersection related
 (3) Driveway, alley access related
 (4) Other junction (specify) _____

(5) Unknown type of junction

(9) Unknown

20. Trafficway Flow 0
 (0) Not physically divided (two way traffic)
 (1) Divided trafficway-median strip without positive barrier
 (2) Divided trafficway-median strip with positive barrier
 (3) One way traffic
 (9) Unknown

21. Number Of Travel Lanes 2
 (1) One
 (2) Two
 (3) Three
 (4) Four
 (5) Five
 (6) Six
 (7) Seven or more
 (9) Unknown

22. Roadway Alignment 1
 (1) Straight
 (2) Curve right
 (3) Curve left
 (9) Unknown

23. Roadway Profile 1
 (1) Level
 (2) Uphill grade (> 2%)
 (3) Hill crest
 (4) Downhill grade (> 2%)
 (5) Sag
 (9) Unknown

24. Roadway Surface Type 2
 (1) Concrete
 (2) Bituminous (asphalt)
 (3) Brick or block
 (4) Slag, gravel, or stone
 (5) Dirt
 (8) Other (specify): _____
 (9) Unknown

25. Roadway Surface Condition 1

- (1) Dry
 (2) Wet
 (3) Snow or slush
 (4) Ice
 (5) Sand, dirt, or oil
 (8) Other (specify): _____
 (9) Unknown

26. Light Conditions 1

- (1) Daylight
 (2) Dark
 (3) Dark, but lighted
 (4) Dawn
 (5) Dusk
 (9) Unknown

27. Atmospheric Conditions 0

- (0) No adverse atmospheric-related driving conditions
 (1) Rain
 (2) Sleet/hail
 (3) Snow
 (4) Fog
 (5) Rain and fog
 (6) Sleet and fog
 (7) Other (e.g., smog, smoke, blowing sand or dust, etc.) (specify): _____
 (9) Unknown

28. Traffic Control Device 2

- (0) No traffic control(s)
 (1) Traffic control signal (not RR crossing)

Regulatory

- (2) Stop sign
 (3) Yield sign
 (4) School zone sign
 (5) Other regulatory sign (specify): _____

- (6) Warning sign (not RR crossing)
 (7) Unknown sign
 (8) Miscellaneous/other controls including RR controls (specify): _____

(9) Unknown

29. Traffic Control Device Functioning 2

- (0) No traffic control device
 (1) Traffic control device not functioning (specify): _____
 (2) Traffic control device functioning properly
 (9) Unknown

PRECRAASH DRIVER RELATED DATA

30. Driver's Distraction/Inattention To Driving 01
 (Prior To Recognition Of Critical Event)
 (00) No driver present
 (01) Attentive or not distracted
 (02) Looked but did not see
- Distractions*
 (03) By other occupant(s), (specify): _____
 (04) By moving object in vehicle (specify): _____
 (05) While talking or listening to cellular phone
 (specify location and type of phone): _____
 (06) While dialing cellular phone (specify location
 and type of phone): _____
 (07) While adjusting climate controls
 (08) While adjusting radio, cassette, CD (specify): _____
 (09) While using other device/object in vehicle
 (specify): _____
 (10) Sleepy or fell asleep
 (11) Distracted by outside person, object, or event
 (specify): _____
 (12) Eating or drinking
 (13) Smoking related
 (97) Distracted/inattentive, details unknown
 (98) Other, distraction (specify): _____
 (99) Unknown
31. Pre-Event Movement (Prior to 04
 Recognition of Critical Event)
 (00) No driver present
 (01) Going straight
 (02) Decelerating in traffic lane
 (03) Accelerating in traffic lane
 (04) Starting in traffic lane
 (05) Stopped in traffic lane
 (06) Passing or overtaking another vehicle
 (07) Disabled or parked in travel lane
 (08) Leaving a parking position
 (09) Entering a parking position
 (10) Turning right
 (11) Turning left
 (12) Making a U-turn
 (13) Backing up (other than for parking position)
 (14) Negotiating a curve
 (15) Changing lanes
 (16) Merging
 (17) Successful avoidance maneuver to a previous
 critical event
 (97) Other (specify): _____
 (99) Unknown
32. Critical Precrash Event 17
This Vehicle Loss of Control Due To:
 (01) Blow out or flat tire
 (02) Stalled engine
 (03) Disabling vehicle failure (e.g., wheel fell off)
 (specify): _____
 (04) Non-disabling vehicle problem (e.g., hood flew
 up) (specify): _____
 (05) Poor road conditions (puddle, pot hole, ice, etc.)
 (specify): _____
 (06) Traveling too fast for conditions
 (08) Other cause of control loss (specify): _____
 (09) Unknown cause of control loss

This Vehicle Traveling

- (10) Over the lane line on left side of travel lane
 (11) Over the lane line on right side of travel lane
 (12) Off the edge of the road on the left side
 (13) Off the edge of the road on the right side
 (14) End departure
 (15) Turning left at intersection
 (16) Turning right at intersection
 (17) Crossing over (passing through) intersection
 (18) This vehicle decelerating
 (19) Unknown travel direction

Other Motor Vehicle In Lane

- (50) Other vehicle stopped
 (51) Traveling in same direction with lower steady
 speed
 (52) Traveling in same direction while decelerating
 (53) Traveling in same direction with higher speed
 (54) Traveling in opposite direction
 (55) In crossover
 (56) Backing
 (59) Unknown travel direction of other motor
 vehicle in lane

Other Motor Vehicle Encroaching Into Lane

- (60) From adjacent lane (same direction)—over left
 lane line
 (61) From adjacent lane (same direction)—over right
 lane line
 (62) From opposite direction—over left lane line
 (63) From opposite direction—over right lane line
 (64) From parking lane
 (65) From crossing street, turning into same
 direction
 (66) From crossing street, across path
 (67) From crossing street, turning into opposite
 direction
 (68) From crossing street, intended path not known
 (70) From driveway, turning into same direction
 (71) From driveway, across path
 (72) From driveway, turning into opposite direction
 (73) From driveway, intended path not known
 (74) From entrance to limited access highway
 (78) Encroachment by other vehicle—details
 unknown

Pedestrian, Pedalcyclist, or Other Nonmotorist

- (80) Pedestrian in roadway
 (81) Pedestrian approaching roadway
 (82) Pedestrian—unknown location
 (83) Pedalcyclist or other nonmotorist in roadway
 (specify): _____
 (84) Pedalcyclist or other nonmotorist approaching
 roadway, (specify): _____
 (85) Pedalcyclist or other nonmotorist—unknown
 location (specify): _____

Object or Animal

- (87) Animal in roadway
 (88) Animal approaching roadway
 (89) Animal—unknown location
 (90) Object in roadway
 (91) Object approaching roadway
 (92) Object—unknown location
 (98) Other critical precrash event (specify): _____
 (99) Unknown

33. Attempted Avoidance Maneuver 10

- (00) No driver present
- (01) No avoidance maneuver
- (02) Braking (no lockup)
- (03) Braking (lockup)
- (04) Braking (lockup unknown)
- (05) Releasing brakes
- (06) Steering left
- (07) Steering right
- (08) Braking and steering left
- (09) Braking and steering right
- (10) Accelerating
- (11) Accelerating and steering left
- (12) Accelerating and steering right
- (98) Other action (specify):

(99) Unknown

34. Pre-Impact Stability 1

- (0) No driver present
- (1) Tracking
- (2) Skidding longitudinally—rotation less than 30 degrees
- (3) Skidding laterally—clockwise rotation
- (4) Skidding laterally—counterclockwise rotation
- (7) Other vehicle loss-of-control (specify):

(9) Pre-crash stability unknown

35. Pre-Impact Location 1

- (0) No driver present
- (1) Stayed in original travel lane
- (2) Stayed on roadway but left original travel lane
- (3) Stayed on roadway, not known if left original travel lane
- (4) Departed roadway
- (5) Remained off roadway
- (6) Returned to roadway
- (7) Entered roadway
- (9) Unknown

36. Accident Type 89

(Note: Applicable codes on back of this page)

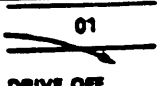


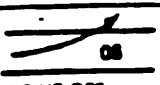
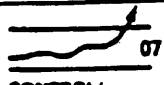
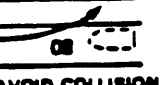
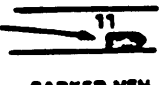
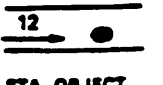
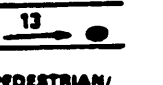
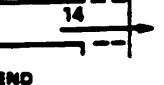
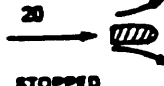

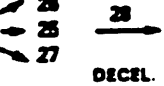
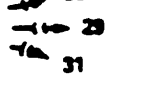
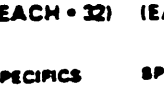
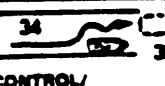
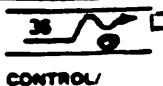

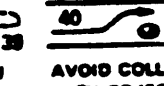
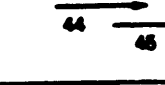
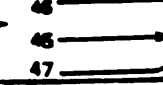
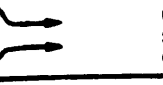

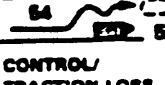
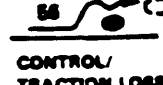




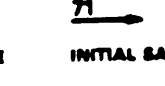
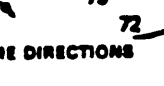





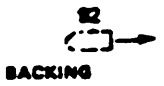

(00) No impact

Code the number of the diagram that best describes the accident circumstance

(98) Other accident type (specify):

(99) Unknown

STOP HERE IF GV07 DOES NOT EQUAL 01 - 49

Category	Configuration	ACCIDENT TYPES (Includes Intent)				
I Single Driver	A Right Roadside Departure	 01 DRIVE OFF ROAD	 02 CONTROL/ TRACTION LOSS	 03 AVOID COLLISION WITH VEH.. PED.. ANIM.	04 SPECIFICS OTHER	05 SPECIFICS UNKNOWN
	B Left Roadside Departure	 06 DRIVE OFF ROAD	 07 CONTROL/ TRACTION LOSS	 08 AVOID COLLISION WITH VEH.. PED.. ANIM.	09 SPECIFICS OTHER	10 SPECIFICS UNKNOWN
	C Forward Impact	 11 PARKED VEH.	 12 STA. OBJECT	 13 PEDESTRIAN/ ANIMAL	 14 END DEPARTURE	15 SPECIFICS OTHER 16 SPECIFICS UNKNOWN
II Same Trafficway Same Direction	D Rear-End	 20 STOPPED 21, 22, 23	 22 SLOWER 24, 25, 27	 26 DECEL. 28, 29, 31	 30 SPECIFICS OTHER	 31 SPECIFICS UNKNOWN
	E Forward Impact	 34 CONTROL/ TRACTION LOSS	 36 CONTROL/ TRACTION LOSS	 38 AVOID COLLISION WITH VEH.	 40 AVOID COLLISION WITH OBJECT	(EACH - 42) SPECIFICS OTHER (EACH - 43) SPECIFICS UNKNOWN
	F Sideswipe Angle	 44 SPECIFICS OTHER	 46 SPECIFICS OTHER	 47 SPECIFICS OTHER	(EACH - 48) SPECIFICS OTHER	(EACH - 49) SPECIFICS UNKNOWN
III Same Trafficway Opposite Direction	G Head-On	 50 LATERAL MOVE	(EACH - 52) SPECIFICS OTHER	(EACH - 53) SPECIFICS UNKNOWN		
	H Forward Impact	 54 CONTROL/ TRACTION LOSS	 56 CONTROL/ TRACTION LOSS	 58 AVOID COLLISION WITH VEH.	 60 AVOID COLLISION WITH OBJECT	(EACH - 62) SPECIFICS OTHER (EACH - 63) SPECIFICS UNKNOWN
	I Sideswipe Angle	 64 LATERAL MOVE	(EACH - 66) SPECIFICS OTHER	(EACH - 67) SPECIFICS UNKNOWN		
IV Change Trafficway Vehicle Turning	J Turn Across Path	 68 INITIAL OPPOSITE DIRECTIONS	 71 INITIAL SAME DIRECTIONS	 73 SPECIFICS OTHER	(EACH - 74) SPECIFICS OTHER (EACH - 75) SPECIFICS UNKNOWN	
	K Turn Into Path	 77 TURN INTO SAME DIRECTION	 79 TURN INTO OPPOSITE DIRECTIONS	 81 SPECIFICS OTHER	(EACH - 84) SPECIFICS OTHER (EACH - 85) SPECIFICS UNKNOWN	
V Intersecting Paths (Vehicle Damage)	L Straight Paths	 87 SPECIFICS OTHER	 89 SPECIFICS OTHER	(EACH - 90) SPECIFICS OTHER	(EACH - 91) SPECIFICS UNKNOWN	
VI Miscellaneous	M Backing Etc	 92 BACKING VEH.	 93 OTHER VEH. OR OBJECT	98 Other Accident Type 99 Unknown Accident Type 00 No Impact		

OCCUPANT RELATED

37. Driver Presence in Vehicle 1
 (0) Driver not present
 (1) Driver present
 (9) Unknown
38. Number of Occupants This Vehicle 01
 (00-96) Code actual number of occupants for this vehicle
 (97) 97 or more
 (99) Unknown
39. Number of Occupant Forms Submitted 01

AIR BAG RELATED

40. Is this an AOPS Vehicle? 0
 (0) No (includes unknown)
 (1) Yes - researcher determined
 (2) VIN determined air bag system
 (3) VIN determined automatic (passive) belts
 (4) VIN determined air bag and automatic (passive) belts
41. Air Bag(s) Deployment, First Seat Frontal 0
 (0) Not equipped or not available
 (1) No air bags deployed
Single Air Bag Vehicle
 (2) Driver air bag deployed
 (3) Driver air bag, unknown if deployed
Multiple Air Bag Vehicle
 (4) Driver side only deployed
 (5) Passenger side only deployed
 (6) Driver and passenger side deployed
 (7) Driver and passenger side unknown if deployed
 (8) Air bag(s) deployed, details unknown
 (9) Unknown
42. Air Bag(s) Deployment, Other Than First Seat Frontal 0
 (0) Not equipped with an "other" air bag
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

Specify type of "other" air bag present: _____

VEHICLE WEIGHT ITEMS

43. Vehicle Curb Weight 1.370
 _____ Code weight to nearest 10 kilograms.
 (045) Less than 450 kilograms
 (610) 6,100 kilograms or more
 (999) Unknown
3,029 lbs X .4536 = 1,374 kgs
 Source: 86' BRANHAM'S +

44. Vehicle Cargo Weight 0010
 _____ Code weight to nearest 10 kilograms.
 (000) Less than 5 kilograms
 (450) 4,500 kilograms or more
 (999) Unknown
15 lbs X .4536 = 7 kgs
 Source: _____

ROLLOVER DATA

45. Rollover 00
 (00) No rollover (no overturning)
Rollover (primarily about the longitudinal axis)
 (01-16) Code the number of quarter turns
 (17) Rollover, 17 or more quarter turns (specify): _____
 (98) Rollover--end-over-end (i.e., primarily about the lateral axis)
 (99) Rollover (overturn), details unknown
46. Rollover Initiation Type 00
 (00) No rollover
 (01) Trip-over
 (02) Flip-over
 (03) Turn-over
 (04) Climb-over
 (05) Fall-over
 (06) Bounce-over
 (07) Collision with another vehicle
 (08) Other rollover initiation type specify): _____
 (98) Rollover--end-over-end
 (99) Unknown rollover initiation type
47. Location of Rollover Initiation 0
 (0) No rollover
 (1) On roadway
 (2) On shoulder--paved
 (3) On shoulder--unpaved
 (4) On roadside or divided trafficway median
 (8) Rollover--end-over-end
 (9) Unknown
48. Rollover Initiation Object Contacted 00
 (Note: Applicable codes on back of page)
49. Location on Vehicle Where Initial Principal Tripping Force Is Applied 0
 (0) No rollover
 (1) Wheels/tires
 (2) Side plane
 (3) End plane
 (4) Undercarriage
 (5) Other location on vehicle (specify): _____
 (6) Non-contact rollover forces (specify): _____
 (8) Rollover--end-over-end
 (9) Unknown
50. Direction of Initial Roll 0
 (0) No rollover
 (1) Roll right - primarily about the longitudinal axis
 (2) Roll left - primarily about the longitudinal axis
 (8) Rollover--end-over-end
 (9) Unknown roll direction

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VERRIDE/UNDERRIDE (THIS VEHICLE)

51. Front Override/Underride (this Vehicle) 0
52. Rear Override/Underride (this Vehicle) 0
- (0) No override/underride, or not an end-to-end impact between two CDS applicable vehicles, and no medium/heavy truck or bus underride
- Override (see specific CDC)*
[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]
- (1) 1st CDC
- (2) 2nd CDC
- (3) Other not automated CDC (specify):

- Underride (see specific CDC)*
[Between 2 CDS applicable vehicles (Bodytype, GV07 = 1-49)]
- (4) 1st CDC
- (5) 2nd CDC
- (6) Other not automated CDC (specify):

- (7) Medium/heavy truck or bus override (of any configuration)
- (9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value

- (997) Noncollision
- (998) Impact with object
- (999) Unknown

53. Heading Angle For This Vehicle 180
54. Heading Angle For Other Vehicle 270

RECONSTRUCTION DATA

55. Towed Trailing Unit 0
- (0) No towed unit
- (1) Yes—towed trailing unit
- (9) Unknown
56. Documentation of Trajectory Data for This Vehicle 0
- (0) No
- (1) Yes
57. Post Collision Condition of Tree or Pole (For Highest Delta V) 0
- (0) Not collision (for highest delta V) with tree or pole
- (1) Not damaged
- (2) Cracked/sheared
- (3) Tilted <45 degrees
- (4) Tilted ≥45 degrees
- (5) Uprooted tree
- (6) Separated pole from base
- (7) Pole replaced
- (8) Other (specify):

- (9) Unknown

ACCIDENT RECONSTRUCTION PROGRAMS HIGHEST DELTA V

58. Basis for Total (Resultant) Delta V (highest) 01

(00) No vehicle inspection

Delta V Calculated

- (01) Reconstruction program -damage only routine
- (02) Reconstruction program -damage and trajectory routine
- (03) Missing vehicle algorithm

Delta V Not Calculated

- (04) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.

All vehicles within scope (CDC applicable) of reconstruction program but one of the collision conditions is beyond the scope of the reconstruction program or other acceptable reconstruction technique, regardless of adequacy of damage data.

- (05) Rollover
- (06) Other non-horizontal forces
- (07) Sideswipe type damage
- (08) Severe override
- (09) Yielding object
- (10) Overlapping damage
- (11) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available, (specify):

- (98) Other, (specify):

COMPUTER GENERATED CRASH SEVERITY

59. Total Delta V

0 2 828 Nearest kmph (highest)

____ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)
 (160) 159.5 kmph and above
 (999) Unknown

60. Longitudinal Component of Delta V

+ 0 0 1 0

Highest

-10 Nearest kmph (highest)

____ Nearest kmph (secondary)

(NOTE: _000 means greater than
 -0.5 kmph and less than +0.5 kmph)
 (±160) ±159.5 kmph and above
 (_999) Unknown

61. Lateral Component of Delta V

+ 0 2 6

Highest

+ 26 Nearest kmph (highest)

____ Nearest kmph (secondary)

(NOTE: _000 means greater than -0.5 kmph
 and less than +0.5 kmph)
 (±160) ±159.5 kmph and above
 (_999) Unknown

62. Energy Absorption

0 5 1 . 6 0 051594 Nearest 100 joules (highest)

____ Nearest 100 joules (secondary)

(NOTE: 0000 means less than 50 joules)
 (9997) 999,650 joules or more
 (9999) Unknown

63. Impact Speed

9 9 8

Highest

____ Nearest kmph (highest)

____ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)
 (160) 159.5 kmph and above
 (998) Trajectory algorithm not run
 (999) Unknown

DELTA V CONFIDENCE LEVEL

64. Confidence In Reconstruction Program Results (For Highest Delta V)

1

- (0) No reconstruction
 (1) Collision fits model — results appear reasonable
 (2) Collision fits model — results appear high
 (3) Collision fits model — results appear low
 (4) Borderline reconstruction — results appear reasonable

OTHER SPEED ESTIMATE

65. Barrier Equivalent Speed

0 3 0

Highest

30 Nearest kmph (highest)

____ Nearest kmph (secondary)

(NOTE: 000 means less than 0.5 kmph)
 (160) 159.5 kmph and above
 (999) Unknown

IS MISSING VEHICLE ALGORITHM APPLICABLE FOR THIS VEHICLE? [] YES [X] NO

IF YES: IS A COMPLETED PROGRAM SUMMARY INCLUDED? [] YES [] NO

ESTIMATED DELTA V	VEHICLE INSPECTION
<p>66. Estimated Highest Delta V (Researcher Determined) <u>0</u></p> <p>(0) Reconstruction Delta V coded</p> <p><i>Estimated Delta V</i></p> <p>(1) Less than 10 kmph</p> <p>(2) ≥ 10 kmph but < 25 kmph</p> <p>(3) ≥ 25 kmph but < 40 kmph</p> <p>(4) ≥ 40 kmph but < 55 kmph</p> <p>(5) ≥ 55 kmph</p> <p><i>Other estimates of damage severity</i></p> <p>(6) Minor</p> <p>(7) Moderate</p> <p>(8) Severe</p> <p>(9) Unknown</p>	<p>67. Type of Vehicle Inspection <u>1</u></p> <p>(0) No inspection</p> <p>(1) Vehicle fully repaired-no damage evident</p> <p>(2) Partial inspection (specify): _____</p> <p>(3) Complete inspection</p>

*** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV67 = 0), ***

DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS

*** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE ***

THE EXTERIOR VEHICLE, INTERIOR VEHICLE,
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

EXTERIOR VEHICLE FORM

**NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM**

Administration		CENSUS-WORTHINESS DATA SYSTEM	
1. Primary Sampling Unit Number	<u>10</u>	3. Vehicle Number	<u>02</u>
2. Case Number - Stratum	<u>9517</u>		

VEHICLE IDENTIFICATION

VIN 1FABP393XFG Model Year 85
Vehicle Make (specify): FORD Vehicle Model (specify): LTD

LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L	Location of Max Crush
01	17cm behind DF axle	between sill and beltline	C-4

CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

[illegible]

ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase 105.6 inches x 2.54 = 268 cm
 Overall Length 196.5 inches x 2.54 = 499 cm
 Maximum Width 71. inches x 2.54 = 180 cm
 Curb Weight 3,029 pounds x 0.4536 = 1,373 kg
 Average Track ^{56.6}_{57.0} } 56.8 inches x 2.54 = 144 cm
 Front Overhang inches x 2.54 = 105 cm
 Rear Overhang inches x 2.54 = 126 cm
 Undeformed End Width inches x 2.54 = cm
 Engine Size: cyl/dspl. cc x 0.001 = 3.8 L
 V6 232 CID x 0.0164 = 3.8 L

5-passengers, 4-doors

Auto News LTD Curb Weight 4 cyl 3001
 Branham LTD Addition for 6 cyl 28
 3029

SPECIAL CRASH INVESTIGATION ADDENDUM

Submodel Designation: {specify} LTD Color: {specify} GRAY Repair Cost: \$

Transmission: {circle} Automatic | Manual Speed: 3-speed | 4-speed | 5-speed | Other:

Steering: {circle} Power-assisted | Manual Type: rack-and-pinion | worm-and-gear | Other

{please describe}:

Brakes: {circle} Power-assisted | Manual Type: 4-wheel disc | 4-wheel drum | 4-wheel hydraulic
| front disc, rear drum | Other:

Observed Defects: {specify}

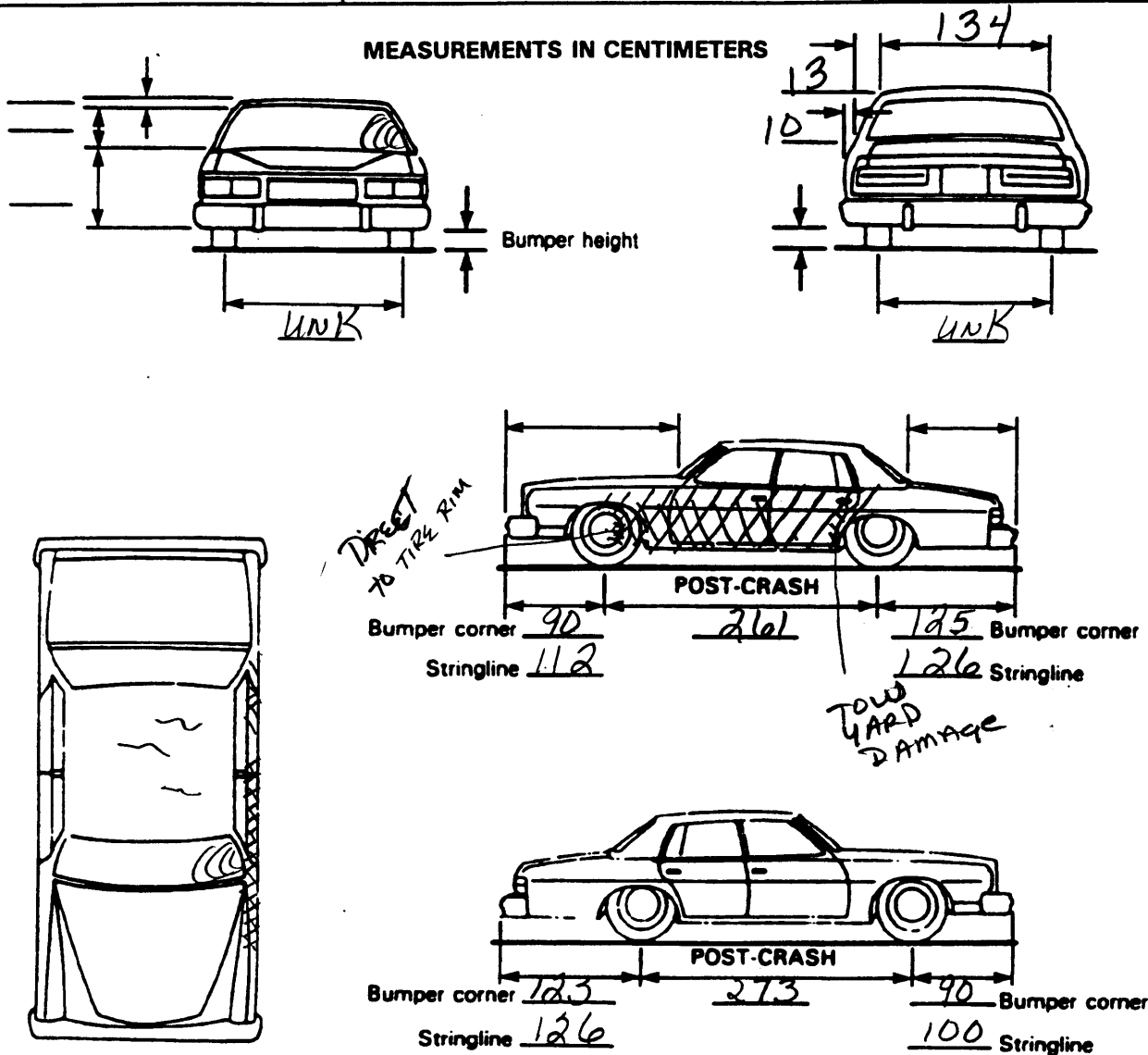
Fleet Type: {circle} Private vehicle | Rental vehicle | Leased vehicle | Commercial vehicle | Other

{please describe}:

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE a. Rotation physically restricted RF <u>2</u> LF <u>2</u> RR <u>2</u> LR <u>2</u> (1) Yes (2) No (8) NA (9) Unk.		ORIGINAL SPECIFICATIONS Wheelbase <u>268</u> cm Overall Length <u>499</u> cm Maximum Width <u>180</u> cm Curb Weight <u>1374</u> kg Average Track <u>144</u> cm Front Overhang <u>105</u> cm Rear Overhang <u>126</u> cm Undeformed End Width _____ cm Engine Size: cyl./displ. <u>3.8</u> L		WHEEL STEER ANGLES (For locked front wheels or displaced rear axles only) RF ± _____ ° LF ± _____ ° RR ± _____ ° LR ± _____ ° Within ± 5 degrees
TYPE OF TRANSMISSION <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Automatic END SHIFT ≥ 10 CM <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		DRIVE WHEELS <input type="checkbox"/> FWD <input checked="" type="checkbox"/> RWD <input type="checkbox"/> 4WD Approximate Cargo Weight _____ kg		

MEASUREMENTS IN CENTIMETERS



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

FORD Motor Co., The American Road, 48121

Type of Body Pass. Cap.	Model	O'r-all Length	Ship. Wt.	Cu. Ft. Vol.	Factory List Pr.	Factory Del'd Pr.
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1984

1984 Optional Equip.: Mustang GT, LTD Sedans & Station Wagon

	Ship. Wgt.	Fact. List	Mustang GT	LTD Sedans	LTD Wagon
573 Air Conditioner—Automatic	58	809	NA	E	E
570 Defroster, Elec., Rear Wind.	2	140	E	E	E
923 Glass—Tinted (Complete)		110	E	E	E
963 Luggage Rack—Power	6	254	177	E	E
547 Luggage Rack—Station Wagon	8	126	NA	NA	E
584 Radio—AM/FM Stereo	6	109	E	E	E
525 Speed Control, Fingertip	3	176	E	E	E
53A Seat, Power—Single Control	40	224	NA	E	E
52Q Tilt Steering Wheel		110	E	E	E
64P Power Windows	16	272	198	E	E
422 Calif. Emission System	2	99	E	E	E

1985

Ford EXP & Escort Series (4-Cyl. 97.6 CID—1.6 L—2-bbl. Carb.) Oct. 4, 1984
Bore & Stroke 3.15"x3.13"; Tax. H.P. 15.88; P.D. 97.6 cu. in. (1.6 Liter)

EXP Series—94.2" w.b.					
2-Ps. 3-dr. Sport Coupe 67D	300A	170.3"	2,095	327.9	\$7,020.00
2-Ps. 3-dr. Lurxor Cpe. 67D	301A	170.3"	2,116	327.9	7,908.00

EXP Series—94.2" w.b. (1.6 Liter Gas Eng. with EFI, Turbo)					
2-Ps. 3-dr. Turbo Coupe 67D	302A	170.3"	2,135	327.9	\$10,320.00

Escort Series—94.2" w.b.					
Base Fuel Saver (FS) 1.6 L CVH 2-bbl. (992/432) 41P (w/4-Spd. Trans., Manual)					
4-Ps. 2-dr. Hatchback 61D	P04	166.8"	339.1	\$5,928.00	\$5,928.00
4-Ps. 4-dr. Hatchback 58D	P13	166.8"	339.1	6,135.00	6,135.00

Escort L Series—with 4-Spd. Manual Trans. (Eng. 992)					
4-Ps. 2-dr. Hatchback 61D	P04	166.8"	1,977	339.1	\$6,184.00
4-Ps. 4-dr. Hatchback 58D	P13	166.8"	2,042	339.1	6,399.00
4-Ps. 4-dr. 2-st. Sta. Wag./74D	P09	165.0"	2,069	335.4	6,613.00

Escort GL—4-Spd. Manual Trans. (Eng. 992)					
4-Ps. 2-dr. Hatchback 61D/CVB	P05	166.8"	2,045	339.1	\$6,682.00
4-Ps. 4-dr. Hatchback 58D/CVB	P14	166.8"	2,210	339.1	6,896.00
4-Ps. 4-dr. 2-st. Wag. 74D/CVB	P10	165.0"	2,139	335.4	7,073.00

Escort LX—Electronic Fuel Injection (EFI) and 5-Spd. Manual Trans. (Eng. 995)					
4-Ps. 4-dr. Hatchback 58D/BYB	P15	166.8"	2,162	339.1	\$8,148.00
4-Ps. 4-dr. 2-st. Wag. 74D/BYB	P11	165.0"	2,185	335.4	8,239.00

Escort GT—with EFI and 5-Spd. Manual Trans.					
4-Ps. 2-dr. Hatchback 61D/B9B	P07	166.8"	2,127	339.1	\$7,893.00

Escort—Turbo GT—5-Spd. Manual Trans. (Eng. EFI 998)					
4-Ps. 2-dr. Turbo Hatchback P07/935	166.8"	NA	339.1	\$8,988.00	\$8,988.00
Engine (Gas): 4-cyl. 97.6 cu. in. 1.6 L, 2-bbl. carb., inline, transverse, comp. ratio 9.0 to 1, net bhp. 70 at 4600 rpm., net torque 88 at 2600 ft./lbs., single exhaust, Manual 4-Spd. Trans. (MTX), fuel tank 13 gals., FWD, Tires: P165/80R13 Steel Belted Radial, 35 lbs. pressure, manual steering, Battery 12V-310 amps, 60 min. reserve.					

1985 EXP & Escort Optional Equip.:

Engines:	Ship. Wgt.	Fact. List	EXP	Escort
99H 4-Cyl. 2.0 L Diesel	230	\$558	NA	E
Calif. Emission System	1	46	E	E
445 5-Spd. Manual Trans.	10	76	S	E
440 Split Torque Auto. Trans.	84	439	363	E
572 Air Cond., Manual	47	643	E	E
582 Radio, AM	7	39	S	E
21C Roof, Flip-Up/Sun	21	315	E	E
525 Speed Control	4	176	E	E
52H Power Steering (1)	8	215	E	E
552 Brakes, Power Front Disc	4	95	S	E
52Q Steering Wheel, Tilt	6	104	E	E
548 Luggage Rack, Dlx. (S.W.)	12	100	NA	E
184 Console	5	111	NA	E
570 Defroster, Rear Window	1	130	NA	E
923 Glass—Tinted, Complete	1	95	E	E
173 Wiper, Washer, Rear Window	13	46/120	NA	E
962 Locks, Power Door 2-dr./4-dr.	4	124/176	NA	E

Ford Mustang, Tempo, LTD, Thunderbird (4-Cyl. 140 CID-2.3 L. 1-bbl.) 9/12/84
Bore & Stroke 3.78"x3.12"; Tax. H.P. 22.87; P.D. 140 cu. in. 2.3 Liter

Mustang LX Model—100.5" w.b.—Gas Eng. (99A) 1-bbl. Carb.					
4-Ps. 2-dr. Sedan 668 (BYB)	P26/602	179.3"	2,572	373.5	\$7,259.00
4-Ps. 3-dr. Sedan 618 (BYB)	P28/602	179.3"	2,613	373.5	7,719.00

Mustang SVT Model—100.5" w.b.—Gas Eng. (99T) EFI Turbo.					
4-Ps. 3-dr. Sedan 618 (88G)	P28/939	180.8"	3,128	376.7	\$14,895.00

FORD Motor Co., The American Road, 48121

Type of Body Pass. Cap.	Model	O'r-all Length	Ship. Wt.	Cu. Ft. Vol.	Factory List Pr.	Factory Del'd Pr.
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1985

Tempo L Model—99.9" w.b.—Gas Eng. (99X) EFI 2300 High Swirl Combustion (HSC)						
5-Ps. 2-dr. Sedan 66D	P18	176.2"	2,264	367.0	\$7,450.00	\$7,450.00
5-Ps. 4-dr. Sedan 54D	P21	176.2"	2,321	367.0	7,450.00	7,450.00

Tempo GL Model—99.9" w.b.—Gas Eng. (99X)						
5-Ps. 2-dr. Sedan 66D	P19	176.2"	2,289	367.0	\$7,558.00	\$7,558.00
5-Ps. 4-dr. Sedan 54D	P22	176.2"	2,348	367.0	7,558.00	7,558.00

Tempo GLX Model—99.9" w.b.—Gas Eng. (99X)						
5-Ps. 2-dr. Sedan 66D	P20	176.2"	2,320	367.0	\$8,651.00	\$8,651.00
5-Ps. 4-dr. Sedan 54D	P23	176.2"	2,377	367.0	8,700.00	8,700.00

Model LTD Sedan—105.6" w.b.—Gas Eng. (99A) 1-bbl. Carb.						
5-Ps. 4-dr. Sedan 54D	P39	196.5"	2,801	434.4	\$9,300.00	\$9,300.00
5-Ps. 4-dr. Thunderbird Sedan 54D	P39/60H	196.5"	2,815	434.4	9,688.00	9,688.00

Thunderbird Turbo Coupe—104.0" w.b.—Gas Eng. (99W) EFI Turbo						
5-Ps. 2-dr. Coupe 63D	P46/934	197.6"	2,950	432.5	\$13,797.00	\$13,797.00
Engine (99A, T.W.X.): 4-cyl. 140 cu. in., 2.3 L., 1-bbl. carb., Inline, High Swirl Combustion (HSC), Comp. ratio 9.5 to 1, net bhp. 88 at 4200 rpm., net torque 122 ft./lbs. at 2600 rpm., single exhaust, manual 4-spd. trans. to Automatic 3-spd. trans., Fuel tank, to 16 gals.						

1985 Optional Equip.: Mustang, Tempo, LTD, Thunderbird

Engines:	Ship. Wgt.	Fact. List	Mustang	Tempo	LTD	Thunderbird
993 V6-232-3.8 L. EFI w/Auto Tr.	28	\$439	E	NA	\$418	S
99M V8-302-5.0 L.—LX Conv.	139	152	E	NA	S	398
V8-302-5.0 L.—LX Sdms.	176	1000	E	NA	S	NA
445 5-Spd. Manual O.D.	23	124	E	S	NA	S
440 SelectShift Automatic	70	439	E	363	S	315
44T Automatic Overdrive GT	NA	676	E	NA	S	237
44T Automatic Overdrive LX	NA	551	E	NA	NA	S
45A Traction-Lok Axle	9	95	E	Pkg.	E	S
52H Power Steering	19	223	S	223	S	S
572 Air Cond., Man./Auto.	49	743/809	E	E	E	743/905
184 Console	8	191	E	Pkg.	NA	NA
57Q Defroster, Rear Wind.	2	140	E	E	E	E
963 Power Lock Group—LX/GT	NA	210/177	E	Pkg.	NA	NA
Power Lock Group—2-dr./4-dr.	1/2	NA	NA	202/254	/254	213
587 Radio—AM/FM w/Stereo	5	148	E	109	109	E
586 Radio, AM/FM Stereo, Elect.	11	300	E	E	409	E
525 Speed Control	6	176	E	E	E	E
52Q Tilt Steering Wheel	4	110	E	S	E	E
422 Calif. Emissions System	1	99	E	E	E	E
64R Windows, Power Side	16	272	E	Pkg.	E	196

Engine (Diesel 99H): 4-cyl. 121 cu. in. 2.0 L, B&S 3.39"x3.39", Tax. H.P. , Comp. ratio 22.7 to 1, net bhp. 52 at 4000 rpm., net torque 82 ft./lbs. at 2400 rpm., single exhaust, manual 5-spd. Trans.

For 1985 Tempo Models, to replace Gas Eng. (99X) with Diesel Eng. (99H), add 97 lbs. and \$479.00 to figures shown.

Ford Ltd., Mustang & Thunderbird (V6-232 CID-3.8 L. EFI) 10/4/84
Bore & Stroke 3.8"x3.4"; Tax. H.P. 34.66; P.D. 232 cu. in., 3.8 Liter

LTD Station Wagon—105.6" w.b.—Rear Wheel Drive (RWD)						
5-Ps. 4-dr. Sta. Wagon 74D	P40	196.5"	2,965	439.2	\$9,810.00	\$9,810.00

Mustang LX Model Convertible—100.5" w.b.						
4-Ps. 2-dr. Convertible						

668 (B2L)	P27/602	179.3"	2,862	373.5	\$12,359.00	\$12,359.00
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Thunderbird (RWD)—104.0" w.b.—Gas Eng. (993) EFI Carb.						
5-Ps. 2-dr. Thunderbird 63D	P46	197.6"	2,937	432.5	\$10,681.00	\$10,681.00

Elan Model—104.0" w.b.						
5-Ps. 2-dr. Elan 63D	P46/607	197.6"	2,993	432.5	\$12,348.00	\$12,348.00

Fila Model—104.0" w.b.						
5-Ps. 2-dr. Fila 63D	P46/606	197.6"	2,937	432.5	\$15,406.00	\$15,406.00

Engine (993) Gas. V6-232 cu. in., 3.8 Liter, 2-bbl. carb., comp. ratio 8.7 to 1, net bhp. 120 at 5600 rpm., net torque 205 ft./lbs. at 1600 rpm., single exhaust, Select Shift 3-Spd. Auto. Trans. Fuel tanks: Mustang 15.4 gals.; LTD 16 gals.; Thunderbird 20.6 gals. Tires: Mustang P195/75R14 BSW Steel Belted Radial, 35 lbs. pressure; LTD, same size, pressure 28 lbs. front, 35 lbs. rear; Thunderbird P205/70R14, Steel Belted Radial, 30 lbs. pressure.

1985 Ford LTD Sta. Wag., Mustang LX Model Convertible, Thunderbird Optional Equip.:

Engines:	Ship. Wgt.	Fact. List	LTD	Mustang LX (Conv.)	Thunderbird
99F-V8-302-5.0 L.	176	\$398	NA	NA	E
99M-V8-302-5.0 L. HO	139	152	NA	E	NA
440 3-Spd. Auto. Trans.	6	315	S	S	E
44T 4-Spd. Auto. O.D. Trans.	6	237	E	676	E
45A Traction-Lok Axle	6	95	E	E	E

COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. <u>01</u>	5. <u>01</u>	6. <u>10</u>	7. <u>L</u>	8. <u>Y</u>	9. <u>E</u>	10. <u>W</u>	11. <u>03</u>

Second Highest Delta "V"

12. _____	13. _____	14. _____	15. _____	16. _____	17. _____	18. _____	19. _____
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CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

HIGHEST DELTA "V"

20. L	21. C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	22. ±D
<u>252</u>	<u>000</u>	<u>010</u>	<u>035</u>	<u>036</u>	<u>019</u>	<u>000</u>	<u>+006</u>

Second Highest Delta "V"

23. L	24. C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	25. ±D
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

26. Undeformed End Width
(Coded when highest severity impact is an end plane impact.) 998
Code to the nearest centimeter
(250) 250 centimeters or more
(998) No highest severity end plane impact
(999) Unknown

27. Direct Damage Width
(For highest severity impact) 215
Code to the nearest centimeter
(250) 250 centimeters or more
(999) Unknown

28. Original Wheelbase 268
Code to the nearest centimeter
(650) 650 centimeters or more
(999) Unknown
_____ inches X 2.54 = _____ centimeters

29. Original Average Track Width 144
Code to the nearest centimeter
(185) 185 centimeters or more
(999) Unknown
_____ inches X 2.54 = _____ centimeters

FUEL SYSTEM

30. Are CDCs Documented
but Not Coded on The
Automated File?

- (0) No
(1) Yes

31. Researcher's Assessment of Vehicle
Disposition

- (0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

32. Is This A Multi-Stage Manufactured Vehicle
And/Or A Certified Altered Vehicle?

- (0) No post manufacturer modifications
(1) Yes - post manufacturer modifications
(specify): _____

(Include photograph of CERTIFICATION
PLACARD in case report)

- (9) Unknown if vehicle is modified

FIRE OCCURRENCE

33. Fire Occurrence

- (0) No fire

Yes, fire occurred

- (1) Minor
(2) Major
(9) Unknown

34. Origin of Fire

- (0) No fire
(1) Vehicle exterior (front, side, back, top)
(2) Exhaust system
(3) Fuel tank (and other fuel retention
system parts)
(4) Engine compartment
(5) Cargo/trunk compartment
(6) Instrument panel
(7) Passenger compartment area
(8) Other location (specify): _____

- (9) Unknown

35. Location of Fuel Tank-1 Filler Cap

36. Location of Fuel Tank-2 Filler Cap

- (0) No fuel tank
(1) On back plane
(2) Aft of center of the rear wheels (rear axle)
on left side plane
(3) Aft of center of the rear wheels (rear axle)
on right side plane
(4) Forward of center of the rear wheels (rear
axle) on left side plane
(5) Forward of center of the rear wheels (rear
axle) on right side plane
(6) Over the center of the rear wheels (rear
axle) on left side plane
(7) Over the center of the rear wheels (rear
axle) on right side plane
(8) Other (specify): _____
(9) Unknown

37. Type of Fuel Tank-1

38. Type of Fuel Tank-2

- (0) No fuel tank (electrical vehicle)
(1) Metallic
(2) Non-metallic
(9) Unknown

39. Location of Fuel Tank-1

40. Location of Fuel Tank-2

- (0) No fuel tank
(1) Aft of center of the rear wheels (rear axle)
centered
(2) Aft of center of the rear wheels (rear axle)
left side
(3) Aft of center of the rear wheels (rear axle)
right side
(4) Forward of center of the rear wheels (rear
axle) centered
(5) Forward of center of the rear wheels (rear
axle) left side
(6) Forward of center of the rear wheels (rear
axle) right side
(7) Over center of the rear wheels (rear axle)
(8) Other (specify): _____
(9) Unknown

41. Damage to Fuel Tank-1

42. Damage to Fuel Tank-2

- (0) No fuel tank
(1) No damage to fuel tank
(2) Deformed, no seam failure
(3) Deformed, with a seam failure
(4) Punctured
(5) Lacerated (ripped)
(6) Abraded (scraped)
(7) Filler neck separation from the fuel tank
(8) Other damage (specify): _____
(9) Unknown

[illegible]



INTERIOR VEHICLE FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

INTEGRITY

4. Passenger Compartment Integrity

(00) No integrity loss

Yes, Integrity Was Lost Through

(01) Windshield

(02) Door (side)

(03) Door/hatch (back door)

(04) Roof

(05) Roof glass

(06) Side window

(07) Rear window (backlight)

(08) Roof and roof glass

(09) Windshield and door (side)

(10) Windshield and roof

(11) Side and rear window (side window and backlight)

(12) Windshield and side window

(13) Door and side window

(98) Other combination of above (specify):

(99) Unknown

Door, Tailgate or Hatch Opening

5. LF 3 6. RF 1 7. LR 3 8. RR 1 9. TG/H 0

(0) No door/gate/hatch

(1) Door/gate/hatch remained closed and operational

(2) Door/gate/hatch came open during collision

(3) Door/gate/hatch jammed shut

(8) Other (specify):

(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 ≠ 2, Then code 0

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

(0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision

(1) Door operational (no damage)

(2) Latch/striker failure due to damage

(3) Hinge failure due to damage

(4) Door structure failure due to damage

(5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage

(6) Latch/striker and hinge failure due to damage

(8) Other failure (specify):

(9) Unknown

GLAZING

Type of Window/Windshield Glazing

15. WS 1 16. LF 2 17. RF 2 18. LR 2 19. RR 2

20. BL 2 21. Roof 0 22. Other 2

(0) No glazing

(1) AS-1 - Laminated

(2) AS-2 - Tempered

(3) AS-3 - Tempered-tinted (original)

(4) AS-2 - Tempered-with after market tint

(5) AS-3 - Tempered-tinted (with additional after market tint)

(6) AS-14 - Glass/Plastic

(7) Glazing removed prior to accident

(8) Other (specify):

(9) Unknown

Window Precrash Glazing Status

23. WS 1 24. LF 3 25. RF 2 26. LR 2 27. RR 2

28. BL 1 29. Roof 0 30. Other 1

(0) No glazing

(1) Fixed

(2) Closed

(3) Partially opened

(4) Fully opened

(7) Glazing removed prior to accident

(9) Unknown

Glazing Damage from Impact Forces

31. WS 2 32. LF 6 33. RF 1 34. LR 1 35. RR 1

36. BL 1 37. Roof 0 38. Other 1

(0) No glazing

(1) No glazing damage from impact forces

(2) Glazing in place and cracked from impact forces

(3) Glazing in place and holed from impact forces

(4) Glazing out-of-place (cracked or not) and not holed from impact forces

(5) Glazing out-of-place and holed from impact forces

(6) Glazing disintegrated from impact forces

(7) Glazing removed prior to accident

(9) Unknown if damaged

Glazing Damage from Occupant Contact

39. WS 1 40. LF 1 41. RF 1 42. LR 1 43. RR 1

44. BL 1 45. Roof 0 46. Other 1

(0) No glazing

(1) No occupant contact to glazing

(2) Glazing contacted by occupant but no glazing damage

(3) Glazing in place and cracked by occupant contact

(4) Glazing in place and holed by occupant contact

(5) Glazing out-of-place (cracked or not) by occupant contact

(6) Glazing out-of-place by occupant contact and not holed by occupant contact

(6) Glazing out-of-place by occupant contact and holed by occupant contact

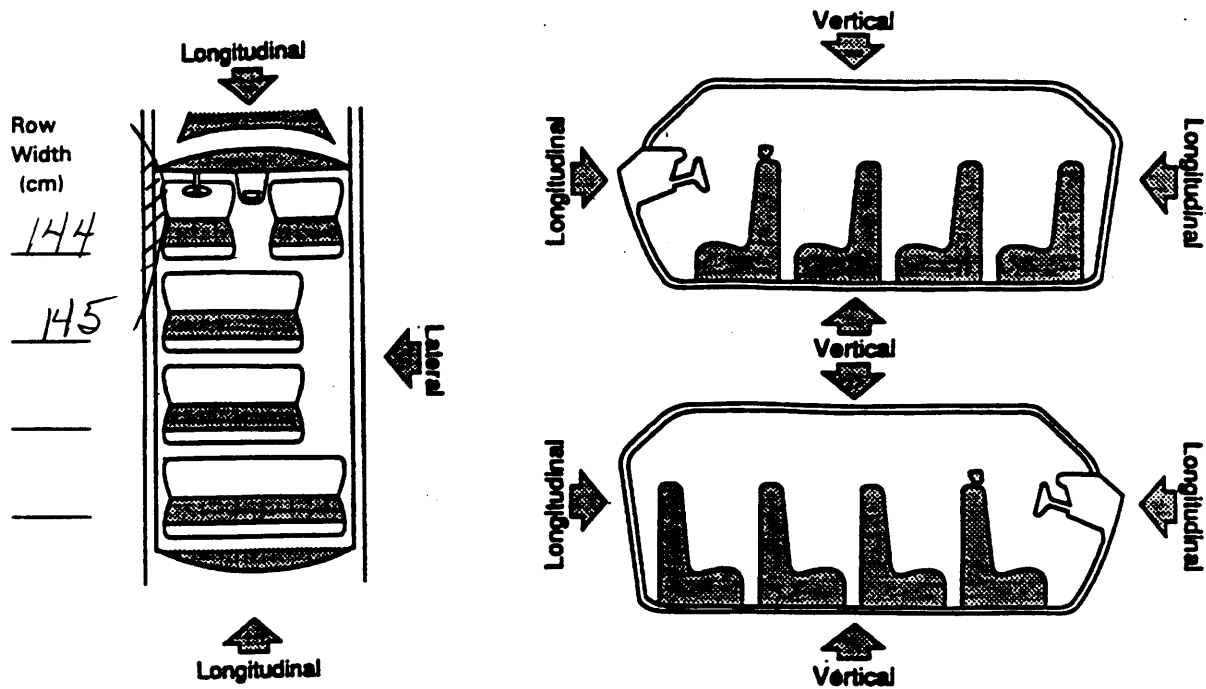
(7) Glazing removed prior to accident

(8) Glazing disintegrated by occupant contact

(9) Unknown if contacted by occupant

INTRUSION WORKSHEET

Note: Sketch intruded areas



LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are In Centimeters)				DOMINANT CRUSH DIRECTION
		COMPARISON VALUE	-	INTRUDED VALUE	=	
11	Door	131	-	101	= 30	LAT
11	B-Pillar	128	-	106	= 22	LAT
21	Door	145	-	140	= 5	LAT
11	Kick Panel	54	-	26	= 28	LAT
11	Seat Back	0	-	0	= 0	LAT
11	Seat Cush	49.5	-	41	= 7.5	LAT
			-		=	
			-		=	
			-		=	
			-		=	
			-		=	
			-		=	
			-		=	
			-		=	
			-		=	
			-		=	

Document no more than the 15 most severe intrusions

OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47. <u>11</u>	48. <u>11</u>	49. <u>4</u>	50. <u>3</u>
2nd	51. <u>11</u>	52. <u>10</u>	53. <u>3</u>	54. <u>3</u>
3rd	55. <u>11</u>	56. <u>07</u>	57. <u>3</u>	58. <u>3</u>
4th	59. <u>11</u>	60. <u>25</u>	61. <u>1</u>	62. <u>3</u>
5th	63. <u>21</u>	64. <u>11</u>	65. <u>1</u>	66. <u>3</u>
6th	67. <u> </u>	68. <u> </u>	69. <u> </u>	70. <u> </u>
7th	71. <u> </u>	72. <u> </u>	73. <u> </u>	74. <u> </u>
8th	75. <u> </u>	76. <u> </u>	77. <u> </u>	78. <u> </u>
9th	79. <u> </u>	80. <u> </u>	81. <u> </u>	82. <u> </u>
10th	83. <u> </u>	84. <u> </u>	85. <u> </u>	86. <u> </u>

LOCATION OF INTRUSION

Front Seat
 (11) Left
 (12) Middle
 (13) Right

Second Seat
 (21) Left
 (22) Middle
 (23) Right

Third Seat
 (31) Left
 (32) Middle
 (33) Right

Fourth Seat
 (41) Left
 (42) Middle
 (43) Right

(97) Catastrophic
 (98) Other enclosed area (specify)

(99) Unknown

INTRUDING COMPONENT

Interior Components

- (01) Steering assembly
- (02) Instrument panel left
- (03) Instrument panel center
- (04) Instrument panel right
- (05) Toe pan
- (06) A (A1/A2)-pillar
- (07) B-pillar
- (08) C-pillar
- (09) D-pillar
- (10) Side panel - forward of the A1/A2-pillar
- (11) Door panel (side)
- (12) Side panel - rear of the B-pillar
- (13) Roof (or convertible top)
- (14) Roof side rail
- (15) Windshield
- (16) Windshield header
- (17) Window frame
- (18) Floor pan (includes sill)
- (19) Backlight header
- (20) Front seat back
- (21) Second seat back
- (22) Third seat back
- (23) Fourth seat back
- (24) Fifth seat back
- (25) Seat cushion
- (26) Back door/panel (e.g., tailgate)
- (27) Other interior component (specify):

Exterior Components

- (30) Hood
- (31) Outside surface of this vehicle (specify):
- (32) Other exterior object in the environment (specify):
- (33) Unknown exterior object
- (97) Catastrophic
- (98) Intrusion of unlisted component(s) (specify):
- (99) Unknown

MAGNITUDE OF INTRUSION

- (1) ≥ 3 centimeters but < 8 centimeters
- (2) ≥ 8 centimeters but < 15 centimeters
- (3) ≥ 15 centimeters but < 30 centimeters
- (4) ≥ 30 centimeters but < 46 centimeters
- (5) ≥ 46 centimeters but < 61 centimeters
- (6) ≥ 61 centimeters
- (7) Catastrophic
- (9) Unknown

DOMINANT CRUSH DIRECTION

- (1) Vertical
- (2) Longitudinal
- (3) Lateral
- (7) Catastrophic
- (9) Unknown

STEERING RIM/SPOKE DEFORMATION

(All Measurements Are in Centimeters)

COMPARISON VALUE	—	DAMAGE VALUE	=	DEFORMATION
------------------	---	--------------	---	-------------

	—		=	
--	---	--	---	--

	—		=	
--	---	--	---	--

	—	No DEFORMATION	=	
--	---	----------------	---	--

	—		=	
--	---	--	---	--

STEERING COLUMN

87. Steering Column Type

- (1) Fixed column
 (2) Tilt column
 (3) Telescoping column
 (4) Tilt and telescoping column
 (8) Other column type (specify):
 (9) Unknown

88. Tilt Steering Column Adjustment

- (0) No tilt steering column
 (1) Full up
 (2) Between full up and center
 (3) Center
 (4) Between center and full down
 (5) Full down
 (9) Unknown

89. Telescoping Steering Column Adjustment

- (0) No telescoping steering column
 (1) Full back
 (2) Between full back and midpoint
 (3) Midpoint
 (4) Between midpoint and full forward
 (5) Full forward
 (9) Unknown

90. Steering Rim/Spoke Deformation

- Code actual measured deformation to the nearest centimeter
 (00) No steering rim deformation
 (01-14) Actual measured value in centimeters
 (15) 15 centimeters or more
 (98) Observed deformation cannot be measured
 (99) Unknown

91. Location of Steering Rim/Spoke Deformation

- (00) No steering rim deformation

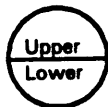
Quarter Sections

- (01) Section A
 (02) Section B
 (03) Section C
 (04) Section D



Half Sections

- (05) Upper half of rim/spoke
 (06) Lower half of rim/spoke
 (07) Left half of rim/spoke
 (08) Right half of rim/spoke
 (09) Complete steering wheel collapse
 (10) Undetermined location
 (99) Unknown



INSTRUMENT PANEL

92. Odometer Reading

999,000
 Unknown if odometer has rolled over!
 kilometers
 Code to the nearest 1,000 kilometers
 (000) No odometer
 (001) Less than 1,500 kilometers
 (500) 499,500 kilometers or more
 (999) Unknown
32,897 miles X 1.6093 = 52,943 kilometers

Source: _____

93. Instrument Panel Damage from Occupant Contact?

- (0) No
 (1) Yes
 (9) Unknown

94. Type of Knee Bolster Covering

- (0) No knee bolster
 (1) Padded
 (2) Rigid plastic
 (8) Other (specify):
 (9) Unknown

95. Knee Bolsters Deformed from Occupant Contact?

- (0) No knee bolster
 (1) No deformation
 (2) Yes - deformation
 (9) Unknown

96. Did Glove Compartment Door Open During Collision(s)?

- (0) No glove compartment door
 (1) No - door did not open
 (2) Yes - door opened
 (9) Unknown

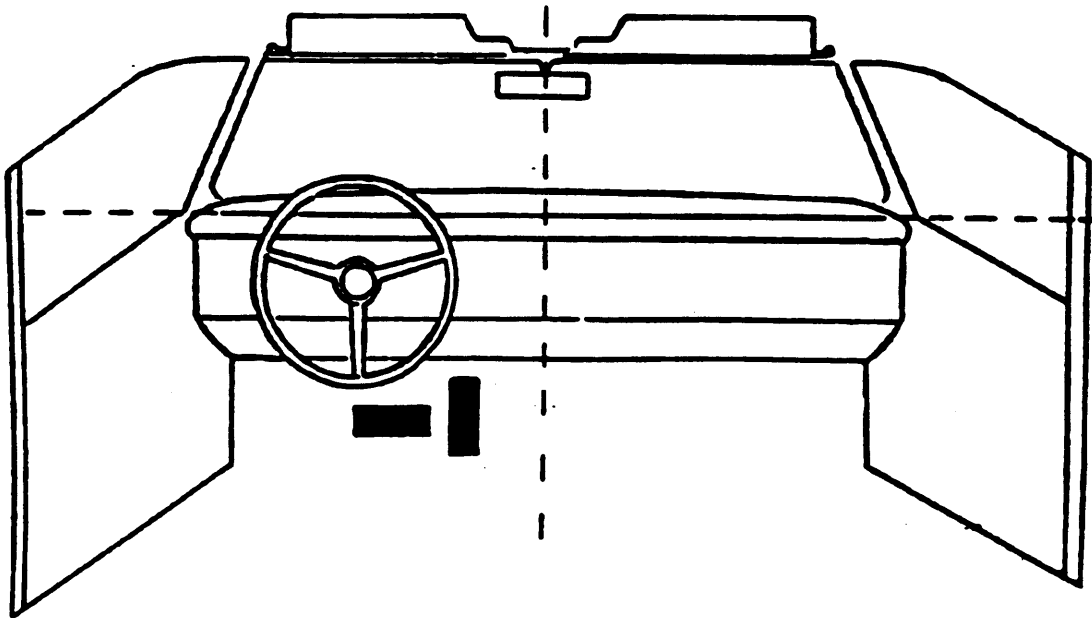
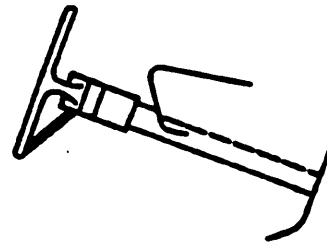
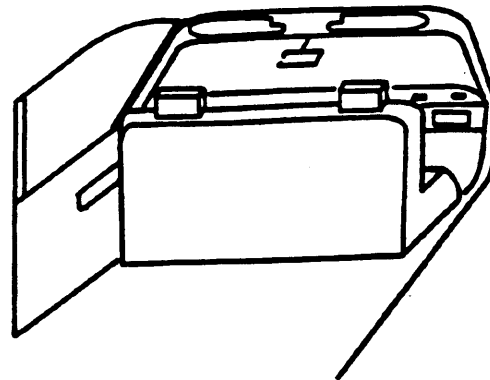
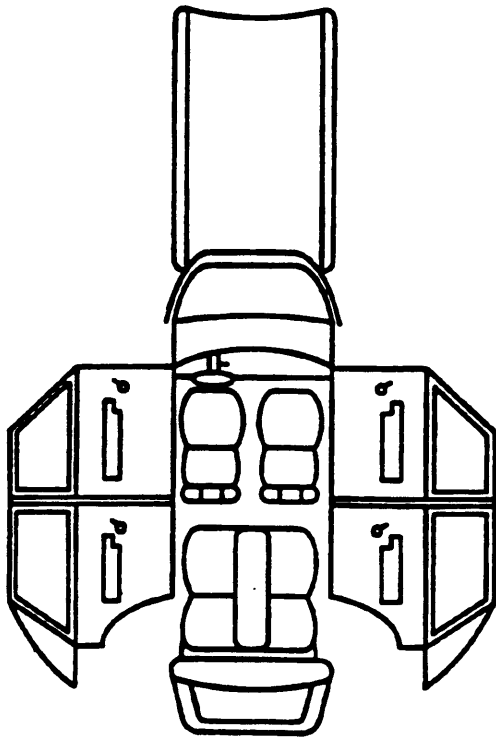
97. Adaptive (Assistive) Driving Equipment

- (0) No adaptive driving equipment
 (1) Adaptive driving equipment installed (Check all that apply.)
 [] Hand controls for braking/acceleration
 [] Steering control devices (attached to OEM steering wheel)
 [] Steering knob attached to steering wheel
 [] Low effort power steering (unit or device)
 [] Replacement steering wheel (i.e., reduced diameter)
 [] Joy-stick steering controls
 [] Wheelchair tie-downs
 [] Modification to seat belts (specify):
 [] Additional or relocated switches (specify):
 [] Raised roof
 [] Wall-mounted head rest (used behind wheelchair)
 [] Other adaptive device (specify):

(9) Unknown

VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure).
 Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.
 Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A					
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					

FRONT

- (001) Windshield
 (002) Mirror
 (003) Sunvisor
 (004) Steering wheel rim
 (005) Steering wheel hub/spoke
 (006) Steering wheel (combination of codes 004 and 005)
 (007) Steering column, transmission selector lever, other attachment
 (008) Cellular telephone or CB radio
 (009) Add on equipment (e.g., tape deck, air conditioner)
 (010) Left instrument panel and below
 (011) Center instrument panel and below
 (012) Right instrument panel and below
 (013) Glove compartment door
 (014) Knee bolster
 (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
 (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
 (017) Windshield reinforced by exterior object, (specify):
 (019) Other front object (specify):

CODES FOR INTERIOR COMPONENTS

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
 (052) Left side hardware or armrest
 (053) Left A (A1/A2)-pillar
 (054) Left B-pillar
 (055) Other left pillar (specify):
 (056) Left side window glass
 (057) Left side window frame
 (058) Left side window sill
 (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
 (060) Other left side object (specify):

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests
 (102) Right side hardware or armrest
 (103) Right A (A1/A2)-pillar
 (104) Right B-pillar
 (105) Other right pillar (specify):
 (106) Right side window glass
 (107) Right side window frame
 (108) Right side window sill
 (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
 (110) Other right side object (specify):

INTERIOR

- (151) Seat, back support
 (152) Belt restraint webbing/buckle
 (153) Belt restraint B-pillar or door frame attachment point
 (154) Other restraint system component (specify):
 (155) Head restraint system
 (160) Other occupants (specify):
 (161) Interior loose objects
 (162) Child safety seat (specify):
 (163) Other interior object (specify):

AIR BAG

- (170) Air bag-driver side
 (175) Air bag compartment cover-driver side
 (180) Air bag-passenger side
 (185) Air bag compartment cover-passenger side
 (190) Other air bag (specify):
 (195) Other air bag compartment cover (specify):

ROOF

- (201) Front header
 (202) Rear header
 (203) Roof left side rail
 (204) Roof right side rail
 (205) Roof or convertible top

FLOOR

- (251) Floor (including toe pan)
 (252) Floor or console mounted transmission lever, including console
 (253) Parking brake handle
 (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
 (302) Backlight storage rack, door, etc.
 (303) Other rear object (specify):

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
 (402) Steering control devices (attached to OEM steering wheel)
 (403) Steering knob attached to steering wheel
 (405) Replacement steering wheel (i.e., reduced diameter)
 (406) Joy stick steering controls
 (407) Wheelchair tie-downs
 (408) Modification to seat belts, (specify):
 (409) Additional or relocated switches, (specify):
 (410) Raised roof
 (411) Wall mounted head rest (used behind wheel chair)
 (412) Other adaptive device (specify):

CONFIDENCE LEVEL OF CONTACT POINT

- (1) Certain
 (2) Probable
 (3) Possible
 (9) Unknown

MANUAL RESTRAINTS

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form. If a Child safety seat is present, encode the data on the back of this page. If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4		4
	Evidence of usage	04		04
	Used in this crash?	99		00
	Proper Use			0
	Failure Modes			0
	Anchorage Adjustment	1		1
SECOND	Availability	3	3	3
	Evidence of usage	01	01	01
	Used in this crash?	00	00	00
	Proper Use	0	0	0
	Failure Modes	0	0	0
	Anchorage Adjustment	0	0	0
OTHER	Availability			
	Evidence of usage			
	Used in this crash?			
	Proper Use			
	Failure Modes			
	Anchorage Adjustment			

Manual (Active) Belt System Availability

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available - type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):

(9) Unknown

Manual (Active) Belt System Use

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperable (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used - type unknown
- (08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

Proper Use of Manual (Active) Belts

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):
- (8) Other improper use of manual belt system (specify):

(9) Unknown

Manual (Active) Belt Failure Modes During Accident

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):
- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other manual belt failure (specify):
- (9) Unknown

Shoulder Belt Upper Anchorage Adjustment

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

AUTOMATIC RESTRAINTS

NOTES: Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

AIR BAGS

		Left Front	Right Front	Other
F I R S T	Availability/Function	○	○	
	Deployment	○	○	
	Failure	○	○	

Air Bag System Availability/Function

- (0) Not equipped/not available
(1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

(3) Air bag not reinstalled
(9) Unknown

Are There Indications of Air Bag System Failure? (This Occupant Position)

- (0) Not equipped/not available
(1) No
(2) Yes (specify):

(9) Unknown

Frontal Air Bag System Deployment (This Occupant Position)

- (0) Not equipped/not available
(1) Deployed during accident (as a result of impact)
(2) Deployed inadvertently just prior to accident
(3) Deployed, accident sequence undetermined
(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
(5) Unknown if deployed
(7) Nondeployed
(9) Unknown

Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position)

- (0) Not equipped with an "other" air bag
(1) Deployed during accident (as a result of impact)
(2) Deployed inadvertently just prior to accident
(3) Deployed, details unknown
(4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
(5) Unknown if deployed
(7) Nondeployed
(9) Unknown

AUTOMATIC BELTS

		Left	Right
F I R S T	Availability/Function	○	○
	Use	○	○
	Type	○	○
	Proper Use	○	○
	Failure Modes	○	○

Automatic (Passive) Belt System Availability/Function

- (0) Not equipped/not available
(1) 2 point automatic belts
(2) 3 point automatic belts
(3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
(9) Unknown

Automatic (Passive) Belt System Use

- (0) Not equipped/not available/destroyed or rendered inoperative
(1) Automatic belt in use
(2) Automatic belt not in use (manually disconnected, motorized track inoperative)
(3) Automatic belt use unknown
(9) Unknown

Automatic (Passive) Belt System Type

- (0) Not equipped/not available
(1) Non-motorized system
(2) Motorized system
(9) Unknown

Proper Use of Automatic (Passive) Belt System

- (0) Not equipped/not available/not used
(1) Automatic belt used properly
(2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
(4) Automatic shoulder belt worn behind back
(5) Automatic belt worn around more than one person
(6) Lap portion of automatic belt worn on abdomen
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):

(9) Unknown

Automatic (Passive) Belt Failure Modes During Accident

- (0) Not equipped/not available/not in use
(1) No automatic belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify):

(6) Broken retractor
(7) Combination of above (specify):

(8) Other automatic belt failure (specify):

(9) Unknown

FIRST SEAT FRONTAL AIR BAGS

NOTES: Encode the applicable data *for the driver and first seat passenger* in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

	Driver	Passenger
Type of air bag?	0	0
Flaps open at tear points?	0	0
Flaps damaged?	0	0
Air bag damaged?	00	00
Source of air bag damage	00	00
Air bag tethered?	0	0
Air bag have vent ports?	0	0
Other occupant contact air bag?	0	0
Occupant wearing eyewear?	0	0

Type of Air Bag

- (0) Not equipped/not available
- (1) Original manufacturer installed system
- (2) Retrofitted air bag
- (3) Replacement air bag
- (8) Unknown type of air bag
- (9) Unknown

Did Air Bag Module Cover Flap(s) Open At Designated Tear Points?

- (0) Not equipped/not available
- (1) No
- (2) Yes
- (3) Deployed, unknown if flap(s) opened at designated tear points
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Were Air Bag Module Cover Flap(s) Damaged?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if air bag module cover flap(s) damaged
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was There Damage To The Air Bag?

- (00) Not equipped/not available
- (01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
- (03) Cut
- (04) Torn
- (05) Holed
- (06) Burned
- (07) Abraded
- (88) Other damage (specify):

- (95) Damaged, details unknown
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Source of Air Bag Damage

- (00) Not equipped/not available
- (01) Not damaged
- (02) Object worn by occupant, (specify):
- (03) Object carried by occupant, (specify):
- (04) Adaptive/assistive controls, (specify):
- (05) Fire in vehicle
- (06) Thermal burns
- (07) Rescue or emergency efforts
- (88) Other damage source (specify):

- (95) Damaged, unknown source
- (96) Deployed, unknown if damaged
- (97) Not deployed
- (98) Unknown if deployed
- (99) Unknown

Was The Air Bag Tethered?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of tether straps):
- (3) Deployed, unknown if tethered
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Did The Air Bag Have Vent Ports?

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify number of vent ports):
- (3) Deployed, unknown if vent ports present
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was the Air Bag in this Occupant's Position Contacted by Another Occupant?

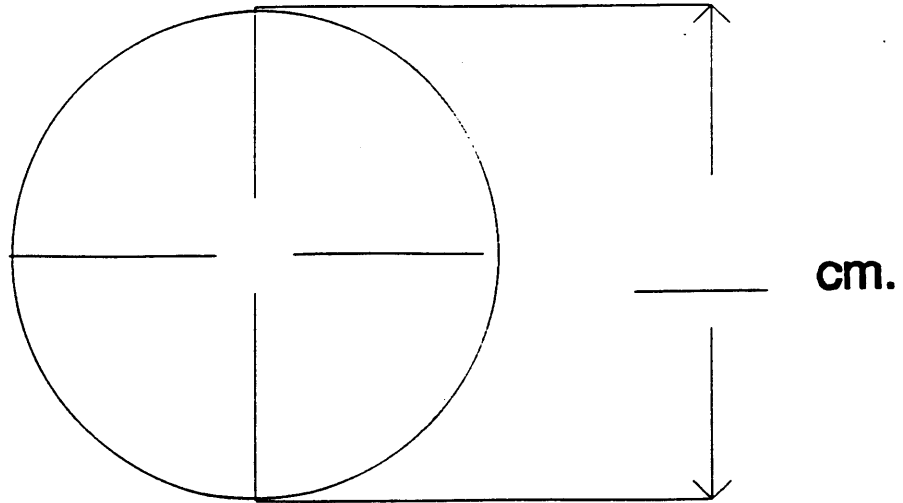
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify):
- (3) Deployed, unknown if other occupant contact to air bag
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

Was This Occupant Wearing Eye-wear?

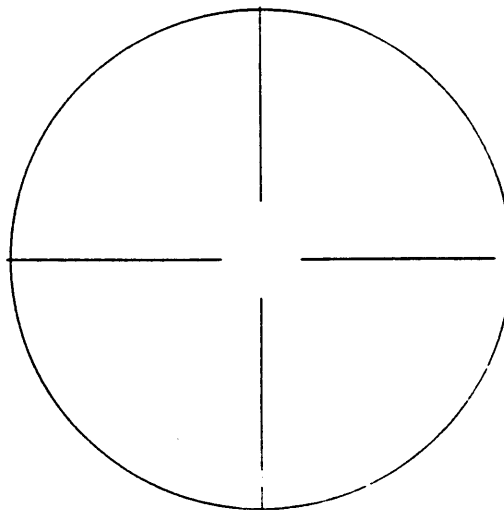
- (0) Not equipped/not available
- (1) No
- (2) Eyeglasses/sunglasses
- (3) Contact lenses
- (4) Deployed, unknown if eyewear worn
- (7) Not deployed
- (8) Unknown if deployed
- (9) Unknown

DRIVER AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Front)



2. SKETCH DAMAGE AND CONTACT EVIDENCE ON DRIVER AIR BAG (Back)



DRIVER AIR BAG SKETCHES (Cont'd)

3. DRIVER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)

a. Upper Flap

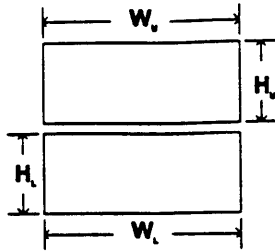
b. Lower Flap

width (W_U) _____

width (W_L) _____

height (H_U) _____

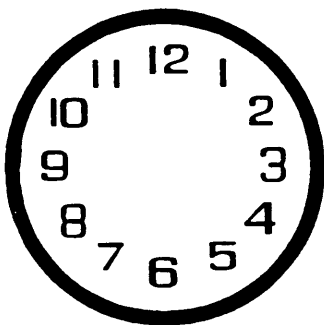
height (H_L) _____



4. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE

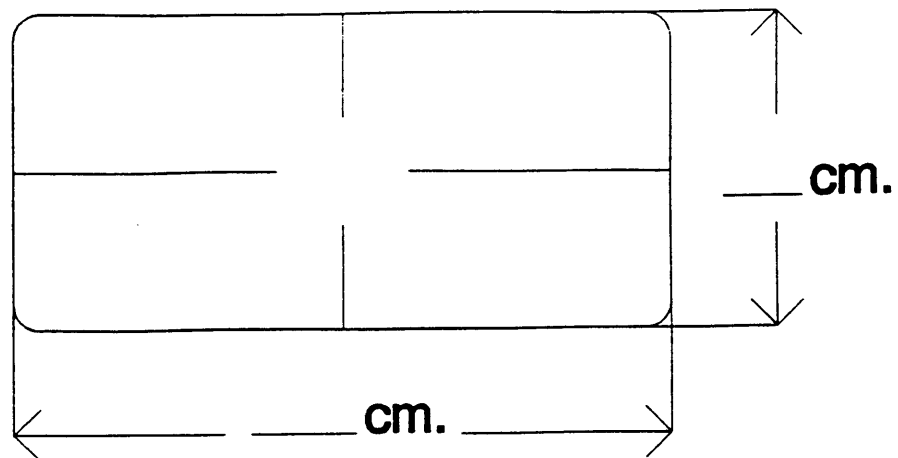
5. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS

6. SKETCH LOCATION OF CIRCULAR AIR BAG VENT PORTS

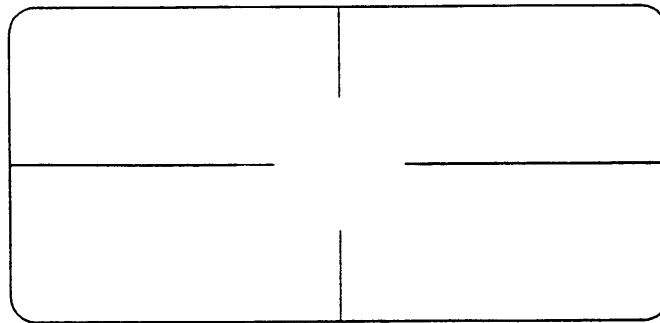


PASSENGER AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Front)



2. SKETCH DAMAGE AND CONTACT EVIDENCE ON PASSENGER AIR BAG (Back)



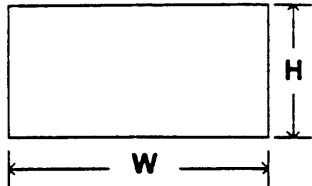
PASSENGER AIR BAG SKETCHES (Cont'd)

3. PASSENGER AIR BAG MODULE COVER FLAP SIZE (SINGLE)

a. Flap

width (W) _____

height (H) _____



4. PASSENGER AIR BAG MODULE COVER FLAP SIZE (DOUBLE)

a. Upper Flap

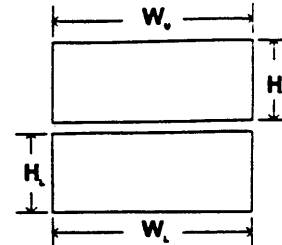
b. Lower Flap

width (W_u) _____

width (W_l) _____

height (H_u) _____

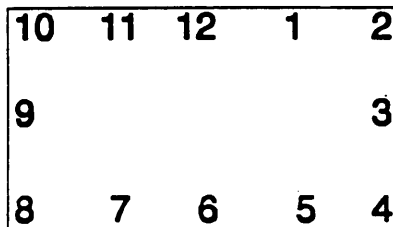
height (H_l) _____



5. SKETCH OF OTHER TYPE OF AIR BAG MODULE FLAP AND SIZE

6. SKETCH OF OTHER TYPE OF AIR BAG VENT PORTS

7. SKETCH LOCATION OF RECTANGULAR AIR BAG VENT PORTS



"OTHER" AIR BAG DAMAGE AND CONTACT SKETCHES

1. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Front)

2. SKETCH DAMAGE AND CONTACT EVIDENCE ON "OTHER" AIR BAG (Back)

"OTHER" AIR BAG SKETCHES (Cont'd)

3. SKETCH AIR BAG MODULE FLAP AND SIZE OR OPENING FOR AIRBAG

4. SKETCH AIR BAG VENT PORTS

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for each seat position in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3		3
	Seat Type	02		02
	Seat Performance	1		1
	Seat Orientation	1		1
	Seat Track Position	3		3
	Seat Back Incline Pre/Post Impact	23		23
SECOND	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
	Seat Track Position	1	1	1
	Seat Back Incline Pre/Post Impact	01	01	01
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
	Seat Track Position			
	Seat Back Incline Pre/Post Impact			

**DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE
(I.E., UNUSUAL OCCUPANT CONTACT PATTERN)**

HEAD RESTRAINTS/SEAT EVALUATION

Head Restraint Type/Damage by Occupant at This Occupant Position

- (0) No head restraints
- (1) Integral — no damage
- (2) Integral — damaged during accident
- (3) Adjustable — no damage
- (4) Adjustable — damaged during accident
- (5) Add-on — no damage
- (6) Add-on — damaged during accident
- (8) Other
Specify): _____
- (9) Unknown

Seat Type (this Occupant Position)

- (00) Occupant not seated or no seat
- (01) Bucket
- (02) Bucket with folding back
- (03) Bench
- (04) Bench with separate back cushions
- (05) Bench with folding back(s)
- (06) Split bench with separate back cushions
- (07) Split bench with folding back(s)
- (08) Pedestal (i.e., column supported)
- (09) Other seat type (specify): _____
- (10) Box mounted seat (i.e., van type)
- (99) Unknown

Seat Performance (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) No seat performance failure(s)
- (2) Seat adjusters failed
- (3) Seat back folding locks or "seat back" failed (specify): _____
- (4) ~~Seat tracks/anchors failed~~
- (5) Deformed by impact of occupant
- (6) Deformed by passenger compartment intrusion (specify): _____
- (7) Combination of above (specify): _____
- (8) Other (specify): _____
- (9) Unknown

Seat Orientation (this Occupant Position)

- (0) Occupant not seated or no seat
- (1) Forward facing seat
- (2) Rear facing seat
- (3) Side facing seat (inward)
- (4) Side facing seat (outward)
- (8) Other (specify): _____
- (9) Unknown

Seat Track Adjusted Position Prior To Impact

- (0) Occupant not seated or no seat
- (1) Non-adjustable seat track

Adjustable Seat Track

- (2) Seat at forward most track position
- (3) Seat between forward most and middle track positions
- (4) Seat at middle track position
- (5) Seat between middle and rear most track positions
- (6) Seat at rear most track position
- (9) Unknown

Seat Back Incline Prior and Post Impact

- (00) Occupant not seated or no seat
- (01) Not adjustable

Upright prior to impact

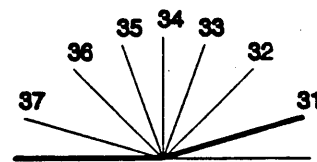
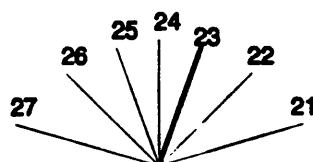
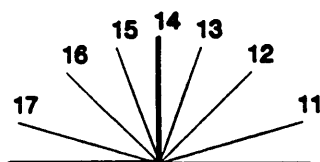
- (11) Moved to completely rearward position
- (12) Moved to rearward midrange position
- (13) Moved to slightly rearward position
- (14) Retained pre-impact position
- (15) Moved to slightly forward position
- (16) Moved to forward midrange position
- (17) Moved to completely forward position

Slightly reclined prior to impact

- (21) Moved to completely rearward position
- (22) Moved to rearward midrange position
- (23) Retained pre-impact position
- (24) Moved to upright position
- (25) Moved to slightly forward position
- (26) Moved to forward midrange position
- (27) Moved to completely forward position

Completely reclined prior to impact

- (31) Retained pre-impact position
- (32) Moved to rearward midrange position
- (33) Moved to slightly rearward position
- (34) Moved to upright position
- (35) Moved to slightly forward position
- (36) Moved to forward midrange position
- (37) Moved to completely forward position
- (99) Unknown



Coding diagrams for Seat Back Incline Position Prior and Post Impact

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE
(I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occupant Assessment Form.

EJECTION No ☒ Yes ☐

Describe indications of ejection and body parts involved in partial ejection(s):

Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

Ejection

- (1) Complete ejection
(2) Partial ejection
(3) Ejection, Unknown degree
(9) Unknown

Ejection Area

- (1) Windshield
(2) Left front
(3) Right front
(4) Left rear
(5) Right rear
(6) Rear

(7) Roof

- (8) Other area (e.g., back of pickup, etc.) (specify):

(9) Unknown**Ejection Medium**

- (1) Door/hatch/tailgate
(2) Nonfixed roof structure
(3) Fixed glazing
(4) Nonfixed glazing (specify):

(5) Integral structure

- (8) Other medium (specify):

(9) Unknown**Medium Status (Immediately Prior to Impact)**

- (1) Open
(2) Closed
(3) Integral structure
(9) Unknown

ENTRAPMENT No ☒ Yes ☐

Describe entrapment mechanism: _____

Component(s): _____

(Note in vehicle interior diagram)

CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Usage						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

1. Type of Child Safety Seat
- (0) No child safety seat
 - (1) Infant seat
 - (2) Toddler seat
 - (3) Convertible seat
 - (4) Booster seat
 - (7) Other type child safety seat (specify):

- (8) Unknown child safety seat type
- (9) Unknown if child safety seat used

2. Child Safety Seat Orientation

- (00) No child safety seat

Designed for Rear Facing for This Age/Weight

- (01) Rear facing
- (02) Forward facing
- (08) Other orientation (specify):

- (09) Unknown orientation

Designed for Forward Facing for This Age/Weight

- (11) Rear facing
- (12) Forward facing
- (18) Other orientation (specify):

- (19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

- (21) Rear facing
- (22) Forward facing
- (28) Other orientation (specify):

- (29) Unknown orientation

- (99) Unknown if child safety seat used

3. Child Safety Seat Harness Usage

4. Child Safety Seat Shield Usage

5. Child Safety Seat Tether Usage

Note: Options Below Are Used for Variables 3-5.

- (00) No child safety seat

Not Designed with Harness/Shield/Tether

- (01) After market harness/shield/tether added, not used
- (02) After market harness/shield/tether used
- (03) Child safety seat used, but no after market harness/shield/tether added
- (09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether

- (11) Harness/shield/tether not used
- (12) Harness/shield/tether used
- (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

- (21) Harness/shield/tether not used
- (22) Harness/shield/tether used
- (29) Unknown if harness/shield/tether used

- (99) Unknown if child safety seat used

6. Child Safety Seat Make/Model
(Specify make/model and occupant number)

Appendix F:

NASS CDS INTERVIEW FORM:

CASE VEHICLE DRIVER



INTERVIEW FORM (A)

1. Primary Sampling Unit Number 10
2. Case Number - Stratum 9517
3. Vehicle Number 01

Interviewee(s) Role or Name(s): DRIVER

Review all available information and interview questions prior to conducting interview(s) to ensure the acquisition of all pertinent data.

If the driver was not the person interviewed, was an appointment made for a follow-up interview?

DRIVER'S DESCRIPTION OF ACCIDENT EVENTS

I was W/B on US in inside lane and
A couple seconds before impact my daughter
saw her come out and said "MDM" Dulled
out and stopped in front of me WE
hit

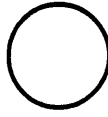
OCCUPANT'S DESCRIPTION OF ACCIDENT EVENTS

SPECIFIC QUESTIONS TO ASK INTERVIEWEE

Final Rest Position SVZ ended up facing E
in middle. I stopped in ORL lane.

Daughter DOB - - = 27
Her DOB - - = 46

ACCIDENT DIAGRAM



NORTH

The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.

CRASH DATA INFORMATION

IF POSSIBLE OBTAIN THIS INFORMATION FROM THE DRIVER:

SOURCE OF INFORMATION:	<input type="checkbox"/> Driver <input type="checkbox"/> Other occupant <input type="checkbox"/> Relative/friend
In which direction were you traveling?	<input type="checkbox"/> North <input type="checkbox"/> South <input type="checkbox"/> East <input checked="" type="checkbox"/> West (Or where were they coming from or going to?)
What lane were you in?	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> Other Note: lane 1 is the right curb lane
What was the condition of the roadway?	<input checked="" type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Snow <input type="checkbox"/> Slush <input type="checkbox"/> Ice <input type="checkbox"/> Sand, dirt, oil <input type="checkbox"/> Other (specify)
What was the weather like? (Check all that apply)	<input checked="" type="checkbox"/> No adverse conditions <input type="checkbox"/> Rain <input type="checkbox"/> Fog <input type="checkbox"/> Sleet <input type="checkbox"/> Hail <input type="checkbox"/> Snow <input type="checkbox"/> Other (specify)
Was there any type of sign or signal present? (check all that apply)	<input type="checkbox"/> Traffic control signal (includes flashing beacons, lane control signals, and green / amber / red signal) <input type="checkbox"/> Stop sign <input type="checkbox"/> Yield sign <input type="checkbox"/> School zone sign <input checked="" type="checkbox"/> Other regulatory sign (No "U" turn, left turn only, wrong way, etc.) specify: <u>MAYBE A SPEED LIMIT SIGN</u> <input type="checkbox"/> Warning sign (Winding road sign, stop ahead, intersection signs, etc.) specify: <input type="checkbox"/> Miscellaneous control (including railroad controls) specify: _____ <input type="checkbox"/> None <input type="checkbox"/> Unknown
If a traffic control device was present, was it functioning properly at the time of the crash?	<input type="checkbox"/> No traffic control device present <input type="checkbox"/> Not functioning properly (includes defaced, badly worn, covered with snow, rotated etc.) specify: <input checked="" type="checkbox"/> Functioning properly <input type="checkbox"/> Unknown
Can you estimate your travel speed before the crash? (in mph)	<input type="checkbox"/> Stopped <input type="checkbox"/> 11-20 <input checked="" type="checkbox"/> 31-40 ³⁵ <input type="checkbox"/> 51-60 <input type="checkbox"/> 70+ <input type="checkbox"/> 1-10 <input type="checkbox"/> 21-30 <input type="checkbox"/> 41-50 <input type="checkbox"/> 61-70 <input type="checkbox"/> Unknown
Just before the crash, what were you doing or intending to do? (check all that apply)	<input checked="" type="checkbox"/> Going straight <input type="checkbox"/> Stopped <input type="checkbox"/> Turning left <input type="checkbox"/> Turning right <input type="checkbox"/> Slowing <input type="checkbox"/> Accelerating <input type="checkbox"/> Backing <input type="checkbox"/> Changing lanes to right <input type="checkbox"/> Other (specify): <input type="checkbox"/> Changing lanes to left
Did vehicle lose control due to weather or mechanical problems?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes (describe)
Did driver take avoidance actions? <input checked="" type="checkbox"/> Yes (Check all that apply) → <input type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Braking with lock-up <input type="checkbox"/> Accelerating <input type="checkbox"/> Other (specify): <input checked="" type="checkbox"/> Braking without lock-up <input type="checkbox"/> Steering left <input type="checkbox"/> Releasing brakes <input type="checkbox"/> Steering right
Where was vehicle at time of collision?	<input checked="" type="checkbox"/> Original travel lane <input type="checkbox"/> Different travel lane <input type="checkbox"/> In intersection <input type="checkbox"/> Off roadway to right <input type="checkbox"/> Off roadway to left <input type="checkbox"/> Other (specify): _____
Can you estimate your travel speed at the time of collision? (in mph)	<input type="checkbox"/> Stopped <input type="checkbox"/> 11-20 <input checked="" type="checkbox"/> 31-40 <input type="checkbox"/> 51-60 <input type="checkbox"/> 70+ <input type="checkbox"/> 1-10 <input type="checkbox"/> 21-30 <input type="checkbox"/> 41-50 <input type="checkbox"/> 61-70 <input type="checkbox"/> Unknown
Describe all the impacts to the vehicle, including what the vehicle contacted and how this vehicle moved to its stopped position, after the collision?	
What race does the driver consider himself?	<input checked="" type="checkbox"/> White <input type="checkbox"/> American Indian, Eskimo or Aleut, Asian or Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown
Is the driver of Hispanic origin?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown

National Accident Sampling System-Crashworthiness Data System: Interview Form

VEHICLE INFORMATION

ROLLOVER DATA

DID THIS VEHICLE ROLL OVER DURING THE CRASH?

- ☐ YES -- ASK THE FOLLOWING QUESTIONS
☒ NO -- SKIP TO "FIRE DATA" BELOW
☐ UNKNOWN -- SKIP TO "FIRE DATA" BELOW

Describe where the rollover began	<input type="checkbox"/> On roadway <input type="checkbox"/> On shoulder <input type="checkbox"/> On roadside or median <input type="checkbox"/> Unknown
What caused the vehicle to roll over?	<input type="checkbox"/> Other vehicle (specify vehicle number) _____ <input type="checkbox"/> Contact to object (specify): _____ <input type="checkbox"/> Other cause (specify): _____ <input type="checkbox"/> Unknown
Which direction did the vehicle roll?	<input type="checkbox"/> Toward the right (passenger side) <input type="checkbox"/> Toward the left (driver side) <input type="checkbox"/> End-over-end <input type="checkbox"/> Unknown
Estimate the number of quarter turns (each side) or complete turns (4 quarter turns) the vehicle did	_____ Number of quarter turns <input type="checkbox"/> Unknown _____ Number of complete turns
When the vehicle stopped rolling over, which side was in contact with the ground?	<input type="checkbox"/> Left side <input type="checkbox"/> Top <input type="checkbox"/> Right side <input type="checkbox"/> Wheels <input type="checkbox"/> Unknown

FIRE DATA

DID THIS VEHICLE EXPERIENCE A FIRE?

- ☐ YES -- ASK THE FOLLOWING QUESTIONS
☒ NO -- SKIP THIS SECTION
☐ UNKNOWN -- SKIP THIS SECTION

Describe where the fire started, or where the smoke was first seen	<input type="checkbox"/> Under the hood <input type="checkbox"/> In the trunk/cargo area <input type="checkbox"/> Behind the instrument panel <input type="checkbox"/> Under the vehicle <input type="checkbox"/> In the passenger compartment <input type="checkbox"/> From other involved vehicle <input type="checkbox"/> Unknown
Did the fire start with the electrical system?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify): _____ <input type="checkbox"/> Unknown
Did the fire start with the fuel system?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify): _____ <input type="checkbox"/> Unknown
ASK IF THE FIRE INVOLVED THE FUEL SYSTEM Which part of the fuel system may have been involved?	<input checked="" type="checkbox"/> Fuel tank <input type="checkbox"/> Fuel lines <input type="checkbox"/> Engine compartment (specify component if known) <input type="checkbox"/> Unknown

Describe any additional rollover or fire information here:

ADDITIONAL VEHICLE INFORMATION

<p>IF THIS VEHICLE HAS NOT BEEN INSPECTED ASK THIS QUESTION:</p> <p>What is the year, make and model of your vehicle?</p>	<p>Year: 19 ____</p> <p>Make: _____</p> <p>Model: _____</p>
<p>Was there any damage to the vehicle that is not related to this crash?</p>	<p><input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes - describe: _____</p> <p><input type="checkbox"/> Unknown</p>
<p>Did any of the doors or hatch come open during the crash?</p>	<p><input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Yes - describe: _____</p> <p><input type="checkbox"/> Unknown</p>
<p>Did any of the windows break during the crash?</p>	<p><input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes - describe: <u>WS</u></p> <p><input type="checkbox"/> Unknown</p>
<p>Were any windows open (O) or partially open (P) prior to the crash?</p>	<p><input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes * * "O" = open "P" = partially open</p> <p><input type="checkbox"/> WS <input checked="" type="checkbox"/> LF <input type="checkbox"/> RF <input type="checkbox"/> LR <input type="checkbox"/> RR</p> <p><input type="checkbox"/> BL <input type="checkbox"/> Roof <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Unknown</p>
<p>Did the glove compartment door come open during the crash?</p>	<p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes - describe: _____</p> <p><input checked="" type="checkbox"/> Unknown</p>
<p>Was there any cargo in the vehicle at the time of the crash?</p>	<p><input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes - describe: <u>GROCERIES</u></p> <p>Approximate weight - <u>20-30</u> pounds <u>25</u> → <u>11.3 kg</u></p> <p><input type="checkbox"/> Unknown</p>
<p>Approximate mileage on the vehicle?</p>	<p>_____ miles</p> <p><input checked="" type="checkbox"/> Unknown</p>
<p>If you have not inspected the vehicle or permission is needed to ask the driver to look at their vehicle to assess damage and see what the following:</p>	<p>Current location of vehicle: _____</p> <p>Contact person: _____</p>
<p>Detail any notes, questions to ask interviewee (i.e., rescue personnel damage to vehicle) or directions to vehicle location here:</p>	

SPECIAL CRASH INVESTIGATION ADDENDUM: DRIVER INFORMATION	
Do you recall the type of development in the area of the crash?	<input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Undeveloped <input type="checkbox"/> School <input type="checkbox"/> Other: _____
What were the weather conditions at the time of the crash?	<input checked="" type="checkbox"/> Clear (no clouds, no precipitation) <input type="checkbox"/> Cloudy (partially cloudy, no precipitation) <input type="checkbox"/> Overcast (full cloud cover, no precipitation) <input type="checkbox"/> Precipitating <input type="checkbox"/> Unknown
What was the type of precipitation?	<input checked="" type="checkbox"/> No precipitation <input type="checkbox"/> Unknown <input type="checkbox"/> Raining <input type="checkbox"/> Freezing rain <input type="checkbox"/> Sleet <input type="checkbox"/> Snowing <input type="checkbox"/> Hailing
What was the condition of the road surface?	<input checked="" type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Snowy, slushy <input type="checkbox"/> Icy <input type="checkbox"/> Other (e.g., sand, dirt, oil on surface, etc.) <input type="checkbox"/> Unknown
How would you describe the amount of traffic at the time of the crash?	<input type="checkbox"/> Heavy <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Light <input type="checkbox"/> No other traffic present
What is your occupation?	<input type="checkbox"/> Professional <input type="checkbox"/> Technical <input type="checkbox"/> Government official <input type="checkbox"/> Management <input type="checkbox"/> Proprietors <input type="checkbox"/> Sales <input type="checkbox"/> Clerical <input type="checkbox"/> Craftsman and foreman <input type="checkbox"/> Service worker <input checked="" type="checkbox"/> Student <input type="checkbox"/> Farmers and farm-managers <input type="checkbox"/> Farm labors and foreman <input type="checkbox"/> Private household worker <input type="checkbox"/> Housewife <input type="checkbox"/> Other: <u>Nursing student</u>
How long have you driven this vehicle?	Years: _____ Months: <u>> 6 mo, < 1 yr</u>
How many miles do you think that you have driven it in the last 12-month period?	Miles: <u>unk</u>
How often do you drive this particular roadway?	<input type="checkbox"/> Daily <input type="checkbox"/> Twice weekly <input type="checkbox"/> Once weekly <input type="checkbox"/> Twice monthly <input type="checkbox"/> Once monthly <input checked="" type="checkbox"/> Very infrequently <input type="checkbox"/> First time on road <u>my 2ND time EVER</u>
Where were you coming from just prior to the crash?	<input type="checkbox"/> Home <input type="checkbox"/> Work <input type="checkbox"/> School <input checked="" type="checkbox"/> Shopping <input type="checkbox"/> Social/recreational <input type="checkbox"/> Restaurant <input type="checkbox"/> Personal business <input type="checkbox"/> Other: _____
Where were you intending to go when the crash occurred?	<input type="checkbox"/> Home <input type="checkbox"/> Work <input type="checkbox"/> School <input type="checkbox"/> Shopping <input type="checkbox"/> Social/recreational <input type="checkbox"/> Restaurant <input type="checkbox"/> Personal business <input checked="" type="checkbox"/> Other: <u>Niece's House</u>

OCCUPANT DATA QUESTIONS

How many people were in your vehicle at the time of the crash? 3

	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Where was this person sitting in the vehicle? Front Left (FL) Second Left (2L) Front Middle (FM) Second Middle (2M) Front Right (FR) Second Right (2R) Third Left (3L) Other (SPECIFY in block) Third Middle (3M) Third Right (3R)	FRONT LEFT	FR	2L
What is the Sex, Height, Weight, and Age of each occupant?	<input type="checkbox"/> M <input checked="" type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant HEIGHT: <u>5'4</u> WEIGHT: <u>150</u> AGE: <u>46</u>	<input type="checkbox"/> M <input checked="" type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant HEIGHT: <u>5'6</u> WEIGHT: <u>170</u> AGE: <u>26</u>	<input type="checkbox"/> M <input checked="" type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months _____ <input type="checkbox"/> F - Unk. if pregnant HEIGHT: <u>5'2</u> WEIGHT: <u>130</u> AGE: <u>79</u>
Describe how occupant was seated A) Kneeling or standing on seat B) Lying on or across seat C) Kneeling, standing or sitting in front of seat D) Sitting sideways, turned to side or back E) Sitting on console F) Lying back in reclined position G) Other (specify) H) Unknown	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input checked="" type="checkbox"/> Unknown Indicate all letters that apply and describe if other than above
Describe feet and hands/arms location just prior to impact (indicate all that apply) <u>FEET</u> A) On floor or foot controls B) One or both on dash C) One or both on seat D) Other (specify) E) Unknown <u>HANDS / ARMS</u> F) Both hands on steering wheel G) One on wheel, other hand resting or adjusting a control (specify hand on wheel and control involved) H) Dialing a cellular phone (specify location and type of phone) I) Holding a cellular phone (specify location and type of phone) J) Bracing with one or both hands K) On lap L) One or both out of window (specify) M) Other (specify) N) Unknown	Indicate all letters that apply and further describe as needed (A) either (C) on floor or (B) on brake or both on brake (F)	Indicate all letters that apply and further describe as needed BRACED on DASH Feet	Indicate all letters that apply and further describe as needed Both feet on floor might HAVE BRACED
Describe any additional information here: my mom in back ended up on (R) side			

OCCUPANT DATA CONTINUED ON NEXT PAGE

OCCUPANT DATA QUESTIONS (continued)

	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Was your / their back up against the seat back?	<input type="checkbox"/> No (describe) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input type="checkbox"/> Unknown BRACING	<input type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Unknown maybe BRACING
Does this seat position have an adjustable seat track, if so where was the seat located prior to impact?	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input checked="" type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input checked="" type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown
Does this seat position have an adjustable seat back, if so where was the seat back located prior to impact?	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input checked="" type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input checked="" type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined
If this seat position has an adjustable seat back, where was the seat back located after impact?	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input checked="" type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown

Did this vehicle have a cellular phone in it during the crash?

☐ No☐ Yes - describe type: _____
(e.g., portable, mounted in vehicle, flip phone, etc.)☐ Unknown**(Note to researcher: try to determine any driver distractions without implying fault)**

Was the driver doing any of the following? (check all that apply - and specify)

- ☒ Talking to or listening to another occupant (specify):
☐ Was there a moving object in vehicle (specify):
☐ Talking or listening on a cellular phone (specify):
☐ Dialing a cellular phone (specify):
☐ Adjusting climate control (specify):
☐ Adjusting radio, CD or cassette player (specify):
☐ Using other device or object in vehicle (specify):
☐ Sleepy / asleep (specify):
☐ Distracted by outside person, object, or event (specify):
☐ Eating or drinking (specify):
☐ Smoking related (specify):
☐ Other (specify):
☐ Unknown

Describe any additional information here:

RESTRAINT INFORMATION

	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Describe the seat belt available for the seat position NOTE: If a belt is not available for a seat position – describe if removed or not functional.	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:
	<input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):
Do any other belts (such as child safety seats) or other restraint devices (such as air bags) or other safety equipment (such as rollover protection) travel with the door?	<input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both	<input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both
Were you [and other occupant(s)] wearing a seat belt during the accident?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown

SKIP THE FOLLOWING IF NO SEAT BELT WAS WORN

Describe any breaks, tears, or failures to any of the seat belts:			
--	--	--	--

EJECTION, ENTRAPMENT, MOBILITY INFORMATION

	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Was any part of your body thrown outside the vehicle during the crash?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.
Was anyone pinned in the vehicle?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment
How did you [and other occupant(s)] exit the vehicle?	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input checked="" type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input checked="" type="checkbox"/> Exited with some assistance <input type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input checked="" type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown

Further describe any ejection, entrapment, or mobility information here:

Found my daughters sunglasses in front of car on ground.
 my Daughter hit & Hoped W.S.

AIR BAG INFORMATION

WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG?

☒ YES (IF "YES" COMPLETE THIS SECTION)☐ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	DRIVER SIDE FRONTAL	PASSENGER SIDE FRONTAL OCCUPANT # <u>2</u>	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # _____
Had this vehicle been in any previous crashes? <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES - continue to right <input type="checkbox"/> UNKNOWN - go to box below	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed IF PRIOR DEPLOYMENT <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed IF PRIOR DEPLOYMENT <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, <u>with</u> at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed IF PRIOR DEPLOYMENT <input type="checkbox"/> CHECK IF <u>NOT</u> REINSTALLED
Type of air bag?	<input checked="" type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown
Had any prior maintenance / service been performed on the air bag system?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:
Did the air bag inflate during this crash?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No <i>not fully Deployed</i> If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
Was the person in this position wearing any type of eye-wear? (Eyeglasses, sunglasses, contact lenses)	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify: <i>Sunglasses</i>	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Yes - Specify: <i>Sunglasses</i>	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:
Was the air bag in this position contacted by another occupant?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:

Describe any additional information here:

CHILD SAFETY SEAT INFORMATION

WAS THERE A PERSON IN A CHILD SAFETY SEAT IN THIS VEHICLE?

☐ YES (IF "YES" COMPLETE THIS SECTION)☒ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Manufacturer and model of the safety seat?			
Type of safety seat?		<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown
What direction was it facing prior to the crash?		<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown
Was a seat belt used to hold the seat in place?		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
How was the seat belt secured to the child seat?		<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame / outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown
What was the safety seat equipped with at time of purchase?		<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown
Were any of these added after they owned the safety seat?		<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown

Describe any additional information here:

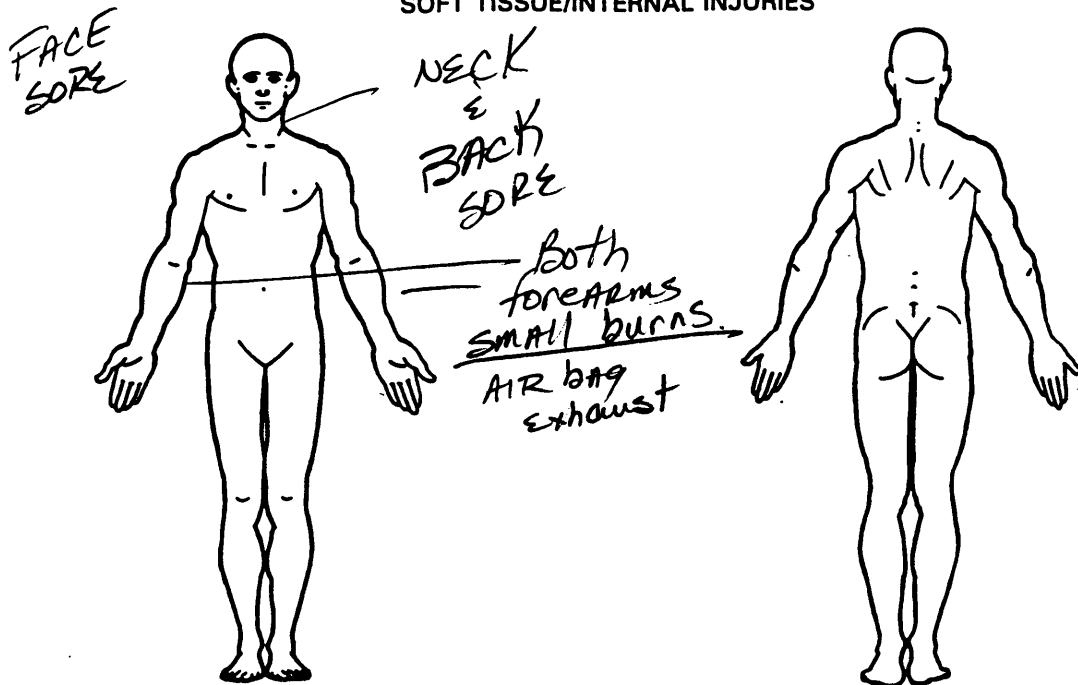
INJURY INFORMATION			
	DRIVER	OCCUPANT # <u>2</u>	OCCUPANT # <u>3</u>
Were you (or any other occupants) injured? > If "YES" go to manikin page and record injuries in detail > If "NO" ask next questions	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Did you (or any other occupants) receive any of the following: (If any injuries are checked, go to the manikin page and record location, lesion, and source)	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify): <u>burns/soreness</u>	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify): <u>soreness</u>
CHECKED MANIKIN PAGE			
Did you (or any other occupants) receive any medical treatment? (check all that apply)	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input checked="" type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown
Were you (or any other occupants) hospitalized?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown
Were you (or any other occupants) treated and released from the emergency room?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Name of medical treatment facility?	<u>DR</u> <u>DR</u>	<u>Hosp</u>	
Have you (or any other occupants) received any follow-up treatment?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - describe: <u>going to a</u> <u>CAT SCAN</u> <u>just to check not yet</u> <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days <input type="checkbox"/> Unknown
IF REQUIRED: Will you sign a medical release? * If not an in-person interview, make appointment to have release signed	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____

PSU Number 10 Case Number-Stratum 9517 Vehicle Number 01 Occupant Number 01

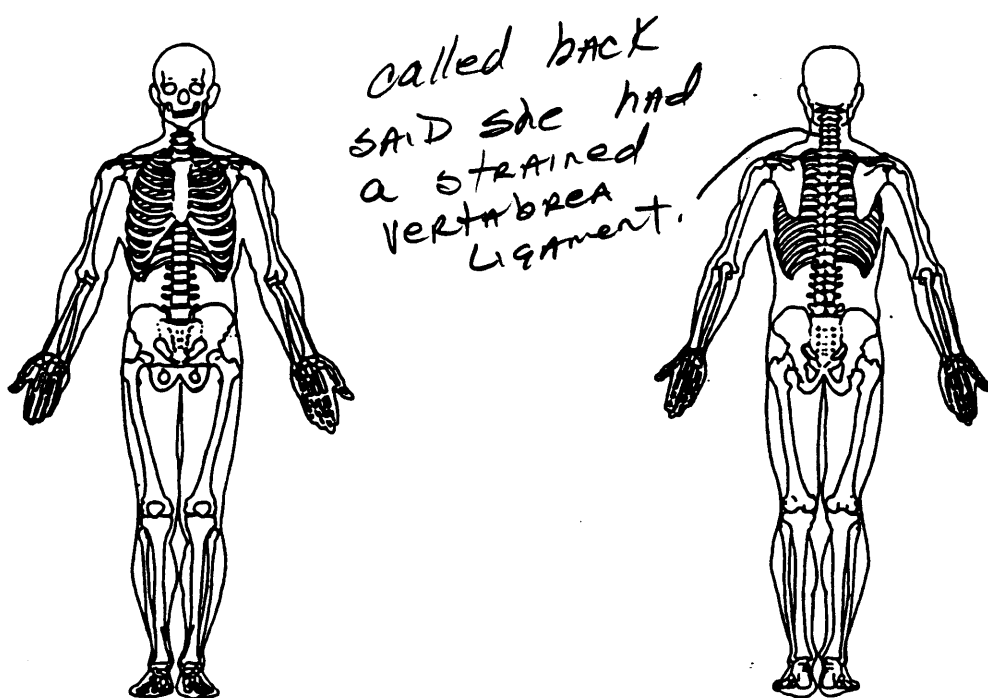
INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): DRIVER

SOFT TISSUE/INTERNAL INJURIES



SKELETAL INJURIES



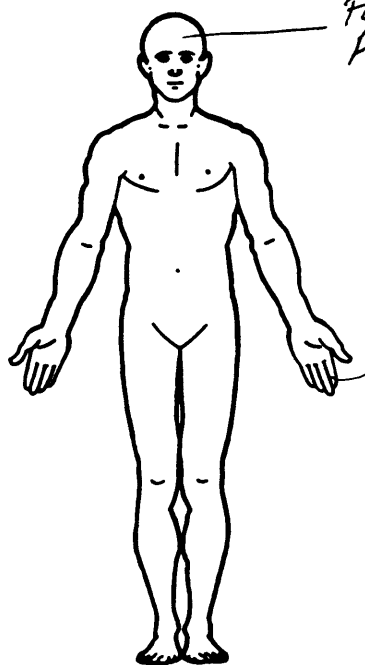
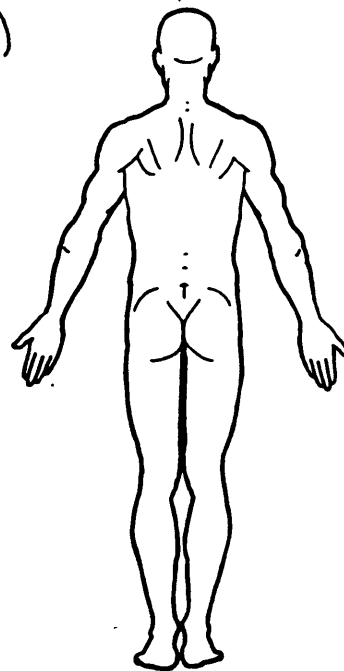
The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

PSU Number 10 Case Number—Stratum 9517 Vehicle Number 01 Occupant Number 02

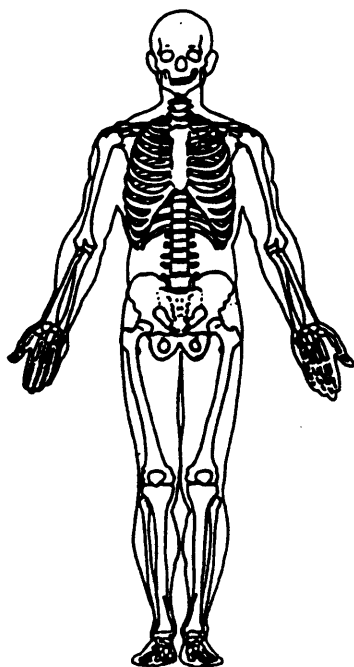
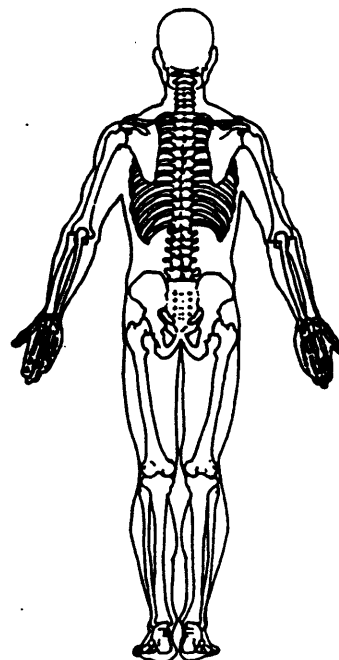
INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): DRIVER/
MOTHER

SOFT TISSUE/INTERNAL INJURIES

FOREHEAD
ABRASION (RED)① finger
cut
w/ glass

SKELETAL INJURIES

NO
LOC

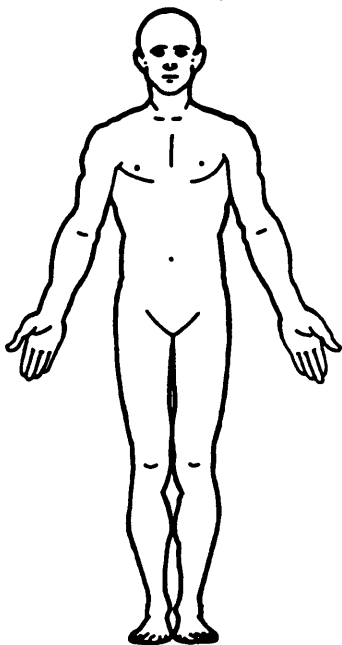
The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

PSU Number 10 Case Number—Stratum 9517 Vehicle Number 01 Occupant Number 03

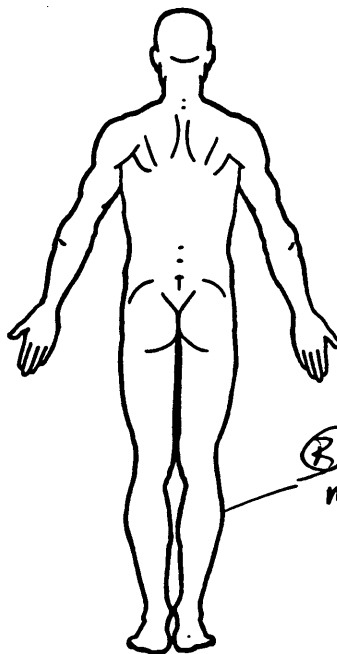
INJURY DATA FROM INTERVIEWEE(S)

Indicate the *Location, Lesion, Detail, and Source* of all injuries. Specify interviewee(s): DRIVER/
DAUGHTER

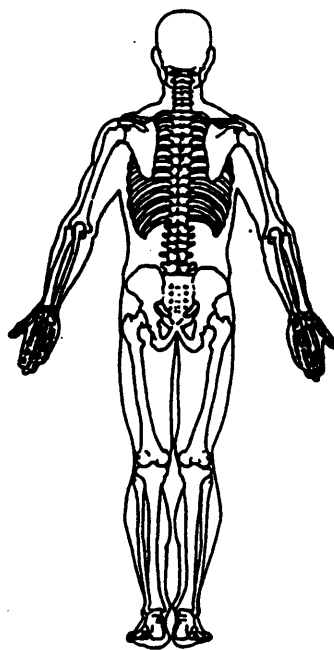
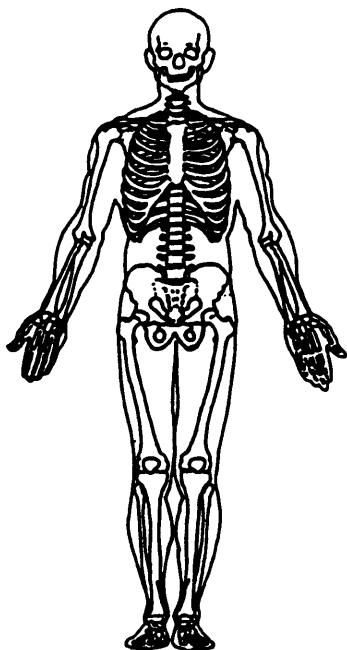
SOFT TISSUE/INTERNAL INJURIES



SORE

③ calf
muscle
CRAMP

SKELETAL INJURIES



The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

Appendix G:

NASS CDS INTERVIEW FORM:

VEHICLE #2 DRIVER



INTERVIEW FORM (A)

1. Primary Sampling Unit Number <u>10</u>	Interviewee(s) Role or Name(s):
2. Case Number - Stratum <u>9517</u>	<u>DRIVER of this veh</u>
3. Vehicle Number <u>02</u>	

Review all available information and interview questions prior to conducting interview(s) to ensure the acquisition of all pertinent data.

If the driver was not the person interviewed, was an appointment made for a follow-up interview?

DRIVER'S DESCRIPTION OF ACCIDENT EVENTS

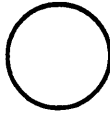
I was crossing intersection I stopped
A truck was turning (R) down my street
blocking my view. I pulled out
saw car then accelerated

OCCUPANT'S DESCRIPTION OF ACCIDENT EVENTS

SPECIFIC QUESTIONS TO ASK INTERVIEWEE

How did your car end up
ended up facing EAST. in median.

ACCIDENT DIAGRAM



NORTH

The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.

CRASH DATA INFORMATION

IF POSSIBLE OBTAIN THIS INFORMATION FROM THE DRIVER:

SOURCE OF INFORMATION:	<input type="checkbox"/> Driver <input type="checkbox"/> Other occupant <input type="checkbox"/> Relative/friend
In which direction were you traveling?	<input type="checkbox"/> North <input checked="" type="checkbox"/> South <input type="checkbox"/> East <input type="checkbox"/> West (Or where were they coming from or going to?)
What lane were you in?	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> Other Note: lane 1 is the right curb lane
What was the condition of the roadway?	<input checked="" type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Snow <input type="checkbox"/> Slush <input type="checkbox"/> Ice <input type="checkbox"/> Sand, dirt, oil <input type="checkbox"/> Other (specify)
What was the weather like? (Check all that apply)	<input checked="" type="checkbox"/> No adverse conditions <input type="checkbox"/> Rain <input type="checkbox"/> Fog <input type="checkbox"/> Sleet <input type="checkbox"/> Hail <input type="checkbox"/> Snow <input type="checkbox"/> Other (specify)
Was there any type of sign or signal present? (check all that apply)	<input type="checkbox"/> Traffic control signal (includes flashing beacons, lane control signals, and green / amber / red signal) <input checked="" type="checkbox"/> Stop sign <input type="checkbox"/> Yield sign <input type="checkbox"/> School zone sign <input type="checkbox"/> Other regulatory sign (No "U" turn, left turn only, wrong way, etc.) specify: <input type="checkbox"/> Warning sign (Winding road sign, stop ahead, intersection signs, etc.) specify: <input type="checkbox"/> Miscellaneous control (including railroad controls) specify: <input type="checkbox"/> None <input type="checkbox"/> Unknown
If a traffic control device was present, was it functioning properly at the time of the crash?	<input type="checkbox"/> No traffic control device present <input type="checkbox"/> Not functioning properly (includes defaced, badly worn, covered with snow, rotated etc.) specify: <input checked="" type="checkbox"/> Functioning properly <input type="checkbox"/> Unknown
Can you estimate your travel speed before the crash? (in mph)	<input type="checkbox"/> Stopped <input checked="" type="checkbox"/> 11-20 <input type="checkbox"/> 31-40 <input type="checkbox"/> 51-60 <input type="checkbox"/> 70+ <input type="checkbox"/> 1-10 <input type="checkbox"/> 21-30 <input type="checkbox"/> 41-50 <input type="checkbox"/> 61-70 <input type="checkbox"/> Unknown
Just before the crash, what were you doing or intending to do? (check all that apply)	<input checked="" type="checkbox"/> Going straight <input type="checkbox"/> Stopped <input type="checkbox"/> Turning left <input type="checkbox"/> Turning right <input type="checkbox"/> Slowing <input type="checkbox"/> Accelerating <input type="checkbox"/> Backing <input type="checkbox"/> Changing lanes to right <input type="checkbox"/> Other (specify): <input type="checkbox"/> Changing lanes to left
Did vehicle lose control due to weather or mechanical problems?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes (describe)
Did driver take avoidance actions? <input checked="" type="checkbox"/> Yes (Check all that apply) → <input type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Braking with lock-up <input checked="" type="checkbox"/> Accelerating <input type="checkbox"/> Other (specify): <input type="checkbox"/> Braking without lock-up <input type="checkbox"/> Steering left <input type="checkbox"/> Releasing brakes <input type="checkbox"/> Steering right
Where was vehicle at time of collision?	<input type="checkbox"/> Original travel lane <input type="checkbox"/> Different travel lane <input type="checkbox"/> In intersection <input type="checkbox"/> Off roadway to right <input type="checkbox"/> Off roadway to left <input type="checkbox"/> Other (specify):
Can you estimate your travel speed at the time of collision? (in mph)	<input type="checkbox"/> Stopped <input checked="" type="checkbox"/> 11-20 <input type="checkbox"/> 31-40 <input type="checkbox"/> 51-60 <input type="checkbox"/> 70+ <input type="checkbox"/> 1-10 <input type="checkbox"/> 21-30 <input type="checkbox"/> 41-50 <input type="checkbox"/> 61-70 <input type="checkbox"/> Unknown
Describe all the impacts to the vehicle, including what the vehicle contacted) and how this vehicle moved to its stopped position, after the collision?	
What race does the driver consider themselves?	<input checked="" type="checkbox"/> White <input type="checkbox"/> American Indian, Eskimo or Aleut, Asian or Pacific Islander <input type="checkbox"/> Black <input type="checkbox"/> Other (specify): <input type="checkbox"/> Unknown
Is the driver of Hispanic origin?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown

VEHICLE INFORMATION

ROLLOVER DATA

DID THIS VEHICLE ROLL OVER DURING THE CRASH?

- ☐ YES - - ASK THE FOLLOWING QUESTIONS
☒ NO - - SKIP TO "FIRE DATA" BELOW
☐ UNKNOWN - - SKIP TO "FIRE DATA" BELOW

Describe where the rollover began	<input type="checkbox"/> On roadway <input type="checkbox"/> On shoulder <input type="checkbox"/> On roadside or median <input type="checkbox"/> Unknown
What caused the vehicle to roll over?	<input type="checkbox"/> Other vehicle (specify vehicle number) _____ <input type="checkbox"/> Contact to object (specify): _____ <input type="checkbox"/> Other cause (specify): _____ <input type="checkbox"/> Unknown
Which direction did the vehicle roll?	<input type="checkbox"/> Toward the right (passenger side) <input type="checkbox"/> Toward the left (driver side) <input type="checkbox"/> End-over-end <input type="checkbox"/> Unknown
Estimate the number of quarter turns (each side) or complete turns (4 quarter turns) the vehicle did	_____ Number of quarter turns <input type="checkbox"/> Unknown _____ Number of complete turns
When the vehicle stopped rolling over, which side was in contact with the ground?	<input type="checkbox"/> Left side <input type="checkbox"/> Top <input type="checkbox"/> Right side <input type="checkbox"/> Wheels <input type="checkbox"/> Unknown

FIRE DATA

DID THIS VEHICLE EXPERIENCE A FIRE?

- ☐ YES - - ASK THE FOLLOWING QUESTIONS
☒ NO - - SKIP THIS SECTION
☐ UNKNOWN - - SKIP THIS SECTION

Describe where the fire started, or where the smoke was first seen	<input type="checkbox"/> Under the hood <input type="checkbox"/> In the trunk/cargo area <input type="checkbox"/> Behind the instrument panel <input type="checkbox"/> Under the vehicle <input type="checkbox"/> In the passenger compartment <input type="checkbox"/> From other involved vehicle <input type="checkbox"/> Unknown
Did the fire start with the electrical system?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify): _____ <input type="checkbox"/> Unknown
Did the fire start with the fuel system?	<input type="checkbox"/> No <input type="checkbox"/> Yes (specify): _____ <input type="checkbox"/> Unknown
ASK IF THE FIRE INVOLVED THE FUEL SYSTEM Which part of the fuel system may have been involved?	<input checked="" type="checkbox"/> Fuel tank <input checked="" type="checkbox"/> Fuel lines <input type="checkbox"/> Engine compartment (specify component if known) <input type="checkbox"/> Unknown

Describe any additional rollover or fire information here:

ADDITIONAL VEHICLE INFORMATION

<p>IF THIS VEHICLE HAS NOT BEEN INSPECTED ASK THIS QUESTION:</p> <p>What is the year, make and model of your vehicle?</p>	<p>Year: 19 ____</p> <p>Make: _____</p> <p>Model: _____</p>
<p>Was there any damage to the vehicle that is not related to this crash?</p>	<p><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - describe: <input type="checkbox"/> Unknown</p>
<p>Did any of the doors or hatch come open during the crash?</p>	<p><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - describe: <input type="checkbox"/> Unknown</p>
<p>Did any of the windows break during the crash?</p>	<p><input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - describe: WS CRACKED <input type="checkbox"/> Unknown DR DOOR</p>
<p>Were any windows open (O) or partially open (P) prior to the crash?</p>	<p><input type="checkbox"/> No <input type="checkbox"/> Yes* * "O" = open "P" = partially open</p> <p><input type="checkbox"/> WS <input checked="" type="checkbox"/> LF <input type="checkbox"/> RF <input type="checkbox"/> LR <input type="checkbox"/> RR <input type="checkbox"/> BL <input type="checkbox"/> Roof <input type="checkbox"/> Other</p> <p><input type="checkbox"/> Unknown</p>
<p>Did the glove compartment door come open during the crash?</p>	<p><input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - describe: <input type="checkbox"/> Unknown</p>
<p>Was there any cargo in the vehicle at the time of the crash?</p>	<p><input checked="" type="checkbox"/> Yes - describe: Approximate weight - 15 pounds → 6.8 kg <input type="checkbox"/> Unknown BOOK BAG</p>
<p>Approximate mileage on the vehicle?</p>	<p>_____ miles <input checked="" type="checkbox"/> Unknown</p>
<p>If you have not inspected the vehicle or permission is needed, ask the owner to look at the vehicle to assess the damage and location of the vehicle.</p>	<p>Current location: _____ Contact person: _____</p>
<p>Detail any notes, questions to ask interviewee (i.e., rescue personnel damage to vehicle) or directions to vehicle location here:</p>	

SPECIAL CRASH INVESTIGATION ADDENDUM: DRIVER INFORMATION

Do you recall the type of development in the area of the crash?	<input checked="" type="checkbox"/> Residential <input type="checkbox"/> Industrial <input type="checkbox"/> Undeveloped <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Agricultural <input type="checkbox"/> School
What were the weather conditions at the time of the crash?	<input checked="" type="checkbox"/> Clear (no clouds, no precipitation) <input type="checkbox"/> Cloudy (partially cloudy, no precipitation) <input type="checkbox"/> Overcast (full cloud cover, no precipitation) <input type="checkbox"/> Precipitating <input type="checkbox"/> Unknown	
What was the type of precipitation?	<input checked="" type="checkbox"/> No precipitation <input type="checkbox"/> Unknown <input type="checkbox"/> Raining <input type="checkbox"/> Freezing rain <input type="checkbox"/> Sleet <input type="checkbox"/> Snowing <input type="checkbox"/> Hailing	
What was the condition of the road surface?	<input checked="" type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Snowy, slushy <input type="checkbox"/> Icy <input type="checkbox"/> Other (e.g., sand, dirt, oil on surface, etc.) <input type="checkbox"/> Unknown	
How would you describe the amount of traffic at the time of the crash?	<input type="checkbox"/> Heavy <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Light <input type="checkbox"/> No other traffic present	
What is your occupation?	<input type="checkbox"/> Professional <input type="checkbox"/> Technical <input type="checkbox"/> Government official <input type="checkbox"/> Management <input type="checkbox"/> Proprietors <input type="checkbox"/> Sales <input type="checkbox"/> Clerical <input type="checkbox"/> Craftsman and foreman <input type="checkbox"/> Service worker <input checked="" type="checkbox"/> Student <input type="checkbox"/> Farmers and farm-managers <input type="checkbox"/> Farm labors and foreman <input type="checkbox"/> Private household worker <input type="checkbox"/> Housewife <input type="checkbox"/> Other: _____	
How long have you driven this vehicle?	Years: _____	Months: <u>2</u>
How many miles do you think that you have driven it in the last 12-month period?	Miles: <u>1000</u>	
How often do you drive this particular roadway?	<input checked="" type="checkbox"/> Daily <input type="checkbox"/> Twice weekly <input type="checkbox"/> Once weekly <input type="checkbox"/> Twice monthly <input type="checkbox"/> Once monthly <input type="checkbox"/> Very infrequently <input type="checkbox"/> First time on road	
Where were you coming from just prior to the crash?	<input checked="" type="checkbox"/> Home <input type="checkbox"/> Work <input type="checkbox"/> School <input type="checkbox"/> Shopping <input type="checkbox"/> Social/recreational <input type="checkbox"/> Restaurant <input type="checkbox"/> Personal business <input type="checkbox"/> Other: _____	
Where were you intending to go when the crash occurred?	<input type="checkbox"/> Home <input type="checkbox"/> Work <input type="checkbox"/> School <input checked="" type="checkbox"/> Shopping <input type="checkbox"/> Social/recreational <input type="checkbox"/> Restaurant <input type="checkbox"/> Personal business <input type="checkbox"/> Other: _____	

OCCUPANT DATA QUESTIONS

How many people were in your vehicle at the time of the crash?

	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Where was this person sitting in the vehicle? Front Left (FL) Second Left (2L) Front Middle (FM) Second Middle (2M) Front Right (FR) Second Right (2R) Third Left (3L) Other (SPECIFY in block) Third Middle (3M) Third Right (3R)	FRONT LEFT		
What is the Sex, Height, Weight, and Age of each occupant?	<input type="checkbox"/> M <input checked="" type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months ____ <input type="checkbox"/> F - Unk. if pregnant HEIGHT: <u>5'3"</u> WEIGHT: <u>115</u> AGE: <u>17</u>	<input type="checkbox"/> M <input type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months ____ <input type="checkbox"/> F - Unk. if pregnant HEIGHT: ____ WEIGHT: ____ AGE: ____	<input type="checkbox"/> M <input type="checkbox"/> F - Not pregnant <input type="checkbox"/> F - Pregnant - # of months ____ <input type="checkbox"/> F - Unk. if pregnant HEIGHT: ____ WEIGHT: ____ AGE: ____
Describe how occupant was seated A) Kneeling or standing on seat B) Lying on or across seat C) Kneeling, standing or sitting in front of seat D) Sitting sideways, turned to side or back E) Sitting on console F) Lying back in reclined position G) Other (specify) H) Unknown	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input checked="" type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown Indicate all letters that apply and describe if other than above	<input type="checkbox"/> Leaning to left <input type="checkbox"/> Leaning to right <input type="checkbox"/> Sitting upright <input type="checkbox"/> Unknown Indicate all letters that apply and describe if other than above
Describe feet and hands/arms location just prior to impact (indicate all that apply) <div style="text-align: center;">FEET</div> A) On floor or foot controls B) One or both on dash C) One or both on seat D) Other (specify) E) Unknown <div style="text-align: center;">HANDS / ARMS</div> F) Both hands on steering wheel G) One on wheel, other hand resting or adjusting a control (specify hand on wheel and control involved) H) Dialing a cellular phone (specify location and type of phone) I) Holding a cellular phone (specify location and type of phone) J) Bracing with one or both hands K) On lap L) One or both out of window (specify) M) Other (specify) N) Unknown	Indicate all letters that apply and further describe as needed <u>1 on gas</u> <u>1 on floor</u> <u>F</u>	Indicate all letters that apply and further describe as needed	Indicate all letters that apply and further describe as needed

Describe any additional information here:

OCCUPANT DATA CONTINUED ON NEXT PAGE

OCCUPANT DATA QUESTIONS (continued)

	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Was your / their back up against the seat back?	<input checked="" type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No (describe) <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Does this seat position have an adjustable seat track, if so where was the seat located prior to impact?	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input checked="" type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Seat all the way forward <input type="checkbox"/> Between forward and middle <input type="checkbox"/> At middle position <input type="checkbox"/> Between middle and rear position <input type="checkbox"/> Seat all the way rearward <input type="checkbox"/> Unknown
Does this seat position have an adjustable seat back, if so where was the seat back located prior to impact?	<input type="checkbox"/> Not adjustable <input checked="" type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely reclined
If this seat position has an adjustable seat back, where was the seat back located after impact?	<input checked="" type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown	<input type="checkbox"/> Not adjustable <input type="checkbox"/> Did not move (retained original position) <input type="checkbox"/> Completely reclined <input type="checkbox"/> Slightly reclined <input type="checkbox"/> Completely upright <input type="checkbox"/> Slightly forward of upright <input type="checkbox"/> Completely forward <input type="checkbox"/> Unknown

Did this vehicle have a cellular phone in it during the crash?

☒ No

☐ Yes - describe type: _____

(e.g., portable, mounted in vehicle, flip phone, etc.)

☐ Unknown

(Note to researcher: try to determine any driver distractions without implying fault)

Was the driver doing any of the following? (check all that apply - and specify)

- ☐ Talking to or listening to another occupant (specify):
- ☐ Was there a moving object in vehicle (specify):
- ☐ Talking or listening on a cellular phone (specify):
- ☐ Dialing a cellular phone (specify):
- ☐ Adjusting climate control (specify):
- ☐ Adjusting radio, CD or cassette player (specify):
- ☐ Using other device or object in vehicle (specify):
- ☐ Sleeping / asleep (specify):
- ☐ Distracted by outside person, object, or event (specify):
- ☐ Eating or drinking (specify):
- ☐ Smoking related (specify):
- ☐ Other (specify):
- ☐ Unknown

Describe any additional information here:

RESTRAINT INFORMATION

	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Describe the seat belt available for the seat position NOTE: If a belt is not available for a seat position – describe if removed or not functional.	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input checked="" type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:	<input type="checkbox"/> Unknown <input type="checkbox"/> Lap belt <input type="checkbox"/> Shoulder belt <input type="checkbox"/> Lap & Shoulder <input type="checkbox"/> Not available * * Describe:
	<input checked="" type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", were they working properly? <input type="checkbox"/> Yes <input type="checkbox"/> No (describe):
Do any of the belts attached to the occupant's seat have a crossbar that is located behind the seat back?	<input checked="" type="checkbox"/> Unknown <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both	<input type="checkbox"/> Unknown <input type="checkbox"/> No <input type="checkbox"/> Yes * * If "Yes", does it cross: <input type="checkbox"/> Chest <input type="checkbox"/> Lap <input type="checkbox"/> Both
Were you [and other occupant(s)] wearing a seat belt during the accident?	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown

SKIP THE FOLLOWING IF NO SEAT BELT WAS WORN

How was the shoulder belt situated?	<input type="checkbox"/> Over the shoulder <input type="checkbox"/> Under the shoulder <input type="checkbox"/> Behind the seat <input type="checkbox"/> Behind the seat <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Over the shoulder <input type="checkbox"/> Under the shoulder <input type="checkbox"/> Behind the seat <input type="checkbox"/> Behind the seat <input type="checkbox"/> Other (specify)	<input type="checkbox"/> Over the shoulder <input type="checkbox"/> Under the shoulder <input type="checkbox"/> Behind the seat <input type="checkbox"/> Behind the seat <input type="checkbox"/> Other (specify)
--	---	---	---

Describe any breaks, tears, or failures to any of the seat belts:

EJECTION, ENTRAPMENT, MOBILITY INFORMATION

	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Was any part of your body thrown outside the vehicle during the crash?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.	<input type="checkbox"/> No <input type="checkbox"/> Yes * <input type="checkbox"/> Unknown * If "Yes" - what part(s) were ejected, and what area of the vehicle was involved.
Was anyone pinned in the vehicle?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment	<input type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment	<input type="checkbox"/> No <input type="checkbox"/> Yes ___ physically pinned ___ jammed doors ___ fire, etc. <input type="checkbox"/> Unknown Detail any entrapment
How did you [and other occupant(s)] exit the vehicle?	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input checked="" type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown	<input type="checkbox"/> Fatal before removed <input type="checkbox"/> Removed while unconscious or disoriented <input type="checkbox"/> Removed due to injuries <input type="checkbox"/> Exited with some assistance <input type="checkbox"/> Exited under own power <input type="checkbox"/> Fully ejected <input type="checkbox"/> Unknown

Further describe any ejection, entrapment, or mobility information here:

AIR BAG INFORMATION

WAS THIS VEHICLE EVER EQUIPPED WITH AN AIR BAG?

☐ YES (IF "YES" COMPLETE THIS SECTION)

☒ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	DRIVER SIDE FRONTAL	PASSENGER SIDE FRONTAL OCCUPANT # ____	"OTHER" AIR BAG SPECIFY: _____ OCCUPANT # ____
Had this vehicle been in any previous crashes? <input type="checkbox"/> NO <input type="checkbox"/> YES - continue to right <input type="checkbox"/> UNKNOWN - go to box below	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, with at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed IF PRIOR DEPLOYMENT <input type="checkbox"/> CHECK IF NOT REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, with at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed IF PRIOR DEPLOYMENT <input type="checkbox"/> CHECK IF NOT REINSTALLED	<input type="checkbox"/> Prior crash <u>without</u> deployment <input type="checkbox"/> One prior crash <u>with</u> deployment <input type="checkbox"/> > 1, with at least one deployment <input type="checkbox"/> Previous accident(s) unknown if deployed IF PRIOR DEPLOYMENT <input type="checkbox"/> CHECK IF NOT REINSTALLED
Type of air bag?	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown	<input type="checkbox"/> Original equipment <input type="checkbox"/> Retrofitted <input type="checkbox"/> Replacement <input type="checkbox"/> Unknown
Had any prior maintenance / service been performed on the air bag system?	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:
Did the air bag inflate during this crash?	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk	<input type="checkbox"/> Yes <input type="checkbox"/> Unknown <input type="checkbox"/> No If "NO" was the wiring disconnected prior to the crash? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unk
Was the person in this position wearing any type of eye-wear? (Eyeglasses, sunglasses, contact lenses)	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Yes - Specify: <i>contacts</i>	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:
Was the air bag in this position contacted by another occupant?	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:	<input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Yes - Specify:

Describe any additional information here:

CHILD SAFETY SEAT INFORMATION

WAS THERE A PERSON IN A CHILD SAFETY SEAT IN THIS VEHICLE?

☐ YES (IF "YES" COMPLETE THIS SECTION)☒ NO ☐ UNKNOWN (IF "NO" OR "UNKNOWN" SKIP THIS SECTION)

	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Manufacturer and model of the safety seat?			
Type of safety seat?		<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Infant <input type="checkbox"/> Toddler <input type="checkbox"/> Convertible <input type="checkbox"/> Booster <input type="checkbox"/> Integral <input type="checkbox"/> Other Specify: _____ <input type="checkbox"/> Unknown
What direction was it facing prior to the crash?		<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown	<input type="checkbox"/> Front <input type="checkbox"/> Rearward <input type="checkbox"/> Unknown
Was a seat belt used to hold the seat in place?		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
How was the seat belt secured to the child seat?		<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Looped through designated rear framing studs <input type="checkbox"/> Looped through arm rest slots <input type="checkbox"/> Belt across safety shield <input type="checkbox"/> Looped through rear frame outside the designated framing struts <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown
What was the safety seat equipped with at time of purchase?		<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> Unknown
Were any of these added after they owned the safety seat?		<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown	<input type="checkbox"/> Harness <input type="checkbox"/> Shield <input type="checkbox"/> Tether <input type="checkbox"/> None <input type="checkbox"/> Unknown

Describe any additional information here:

INJURY INFORMATION

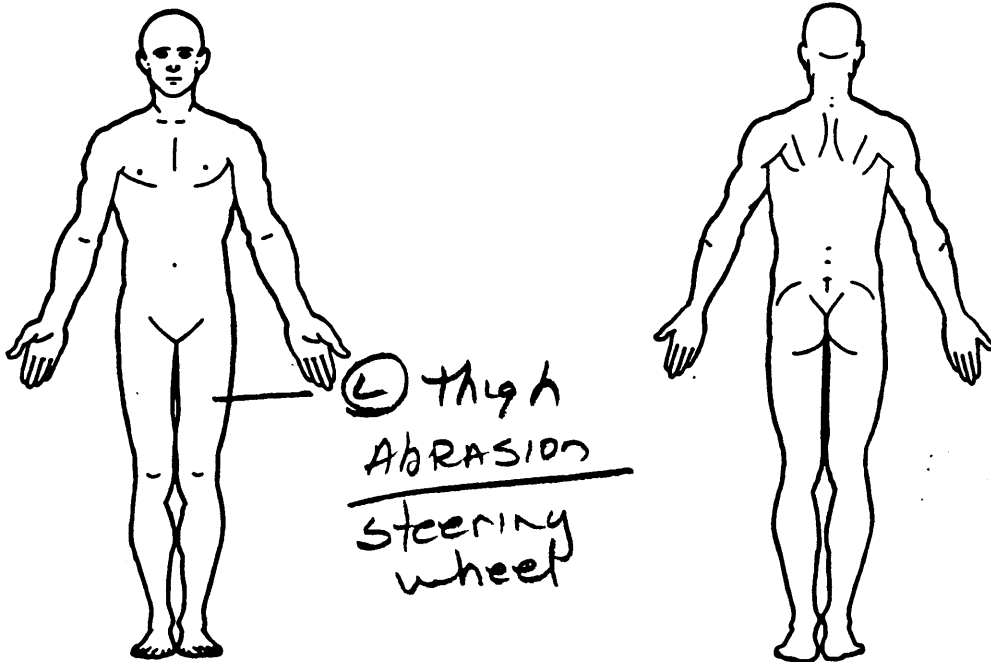
	DRIVER	OCCUPANT # ____	OCCUPANT # ____
Were you (or any other occupants) injured? ► If "YES" go to manikin page and record injuries in detail ► If "NO" ask next questions	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Did you (or any other occupants) receive any of the following: <i>(If any injuries are checked, go to the manikin page and record location, lesion, and source)</i>	<input type="checkbox"/> Cuts <input checked="" type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):	<input type="checkbox"/> Cuts <input type="checkbox"/> Abrasions <input type="checkbox"/> Bruises <input type="checkbox"/> Broken bones <input type="checkbox"/> Head, skull, brain <input type="checkbox"/> Internal injury <input type="checkbox"/> Sprains, strains <input type="checkbox"/> Other (specify):
SEE CHECKED IN THE MANIKIN PAGE(S)			
Did you (or any other occupants) receive any medical treatment? (check all that apply)	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input checked="" type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown	<input type="checkbox"/> Hospital <input type="checkbox"/> Medical clinic <input type="checkbox"/> Paramedics at scene <input type="checkbox"/> Doctor's office <input type="checkbox"/> Treated by self <input type="checkbox"/> Unknown
Were you (or any other occupants) hospitalized?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - number of days _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - number of days _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - number of days _____ <input type="checkbox"/> Unknown
Were you (or any other occupants) treated and released from the emergency room?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Name of medical treatment facility?	N/A		
Have you (or any other occupants) received any follow-up treatment?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes - describe: _____ <input type="checkbox"/> Unknown
Have you (or any other occupants) lost any days from work or school (college) due to the crash?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days _____ <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Not working prior to crash <input type="checkbox"/> Yes - number of days _____ <input type="checkbox"/> Unknown
IF REQUIRED: Will you sign a medical release? <i>* If not an in-person interview, make appointment to have release signed</i>	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____	<input type="checkbox"/> No <input type="checkbox"/> Yes* <input type="checkbox"/> Unknown DATE: _____ TIME: _____ PLACE: _____

PSU Number 10 Case Number—Stratum _____ Vehicle Number _____ Occupant Number _____

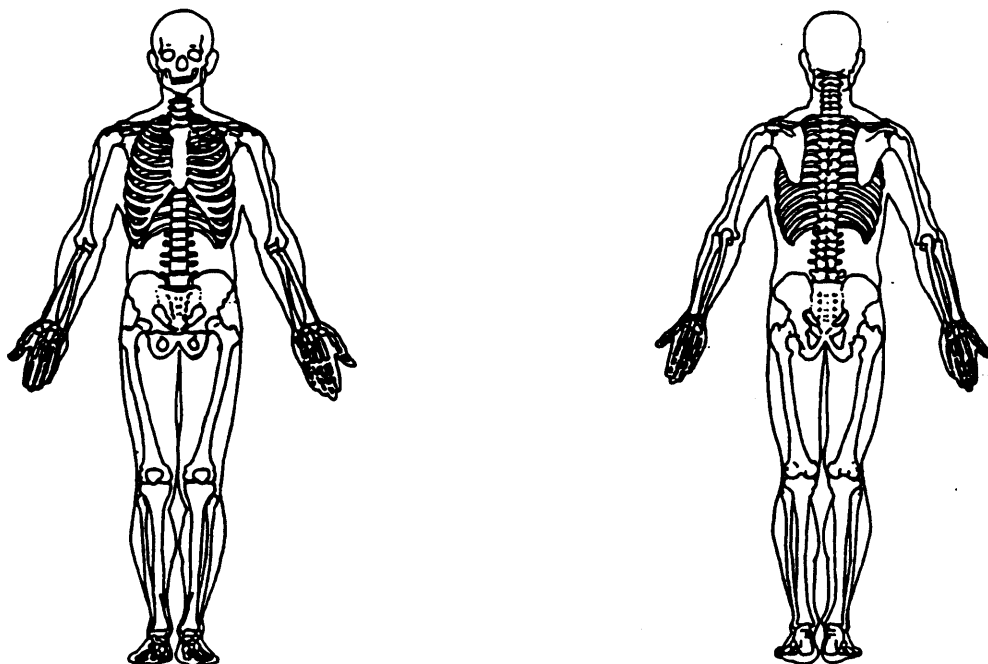
INJURY DATA FROM INTERVIEWEE(S)

Indicate the *Location, Lesion, Detail, and Source* of all injuries. Specify interviewee(s): _____

SOFT TISSUE/INTERNAL INJURIES



SKELETAL INJURIES



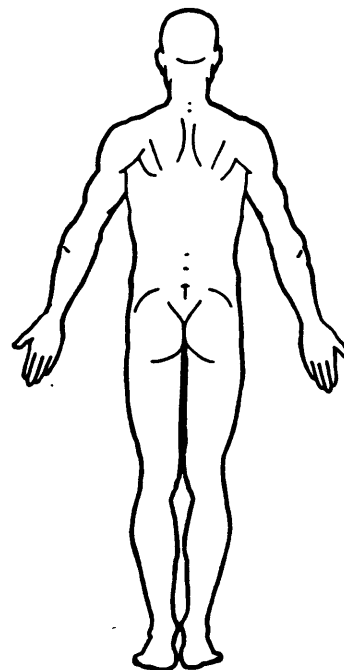
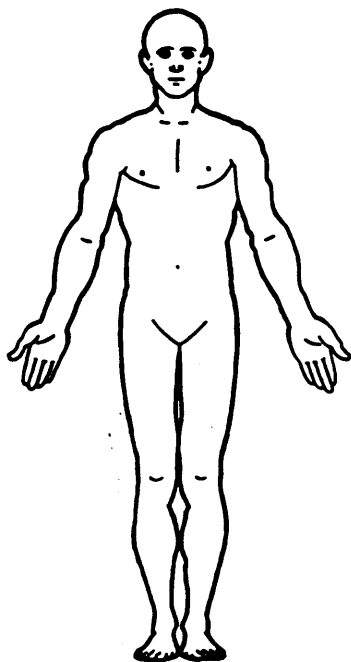
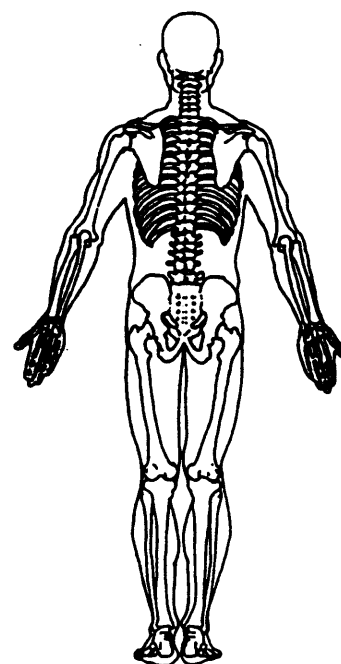
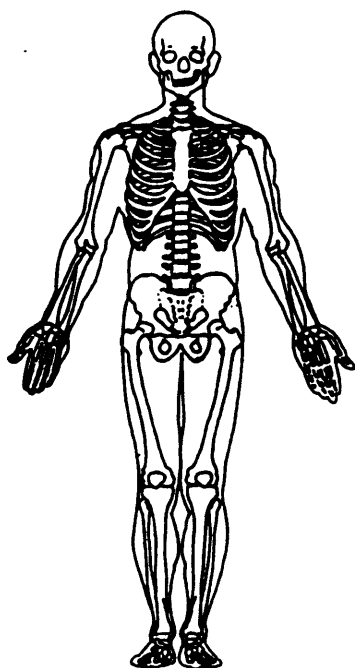
The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

PSU Number 10

Case Number—Stratum _____

Vehicle Number _____

Occupant Number _____

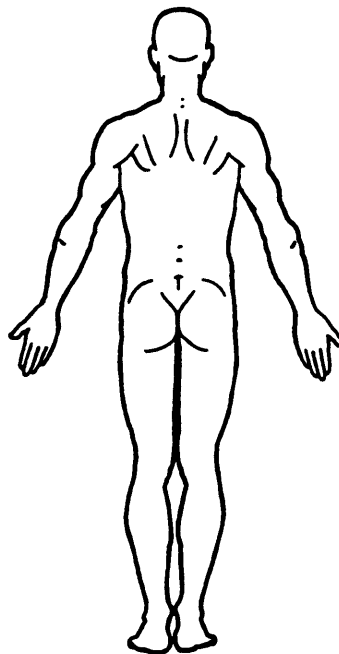
INJURY DATA FROM INTERVIEWEE(S)Indicate the *Location, Lesion, Detail, and Source* of all injuries. Specify interviewee(s): _____**SOFT TISSUE/INTERNAL INJURIES****SKELETAL INJURIES**

The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

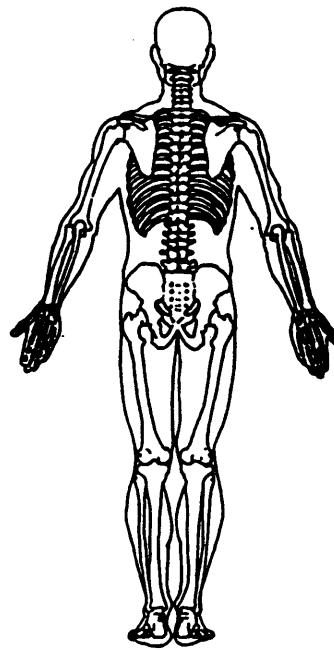
PSU Number 10 Case Number—Stratum Vehicle Number Occupant Number

Indicate the *Location, Lesion, Detail, and Source* of all injuries. Specify interviewee(s): _____

Indicate the *Location, Lesion, Detail, and Source* of all injuries. Specify interviewee(s): _____



A black and white line drawing of a human skeleton, showing the skull, ribcage, spine, pelvis, and long bones of the arms and legs. The skeleton is standing upright with arms slightly away from the body.



The space provided on the back of this page may be used to further detail injuries noted by the interviewee(s).

Appendix H:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE DRIVER



U.S. Department of Transportation
National Highway Traffic Safety
Administration

OCCUPANT ASSESSMENT FORM

Form Approved
O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female-not reported pregnant

(3) Female-pregnant-1st trimester(1st-3rd month)

(4) Female-pregnant-2nd trimester(4th-6th month)

(5) Female-pregnant-3rd trimester(7th-9th month)

(6) Female-pregnant-term unknown

(9) Unknown

7. Occupant's Height

Code actual height to the nearest centimeter.

(999) Unknown

64 inches X 2.54 = 162.56 centimeters

8. Occupant's Weight

Code actual weight to the nearest kilogram.

(999) Unknown

150 pounds X .4536 = 68 kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position

Front Seat

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front of seat

(8) Other abnormal posture (specify):

(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____
- (5) Integral structure
- (8) Other medium (specify): _____
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.
(specify): _____
- (9) Unknown

17. Occupant Mobility 4

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):

(9) Unknown

19. Manual (Active) Belt System Use 04

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of manual belt system (specify):

(9) Unknown

21. Manual (Active) Belt Failure Modes During Accident 1

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):

(8) Other manual belt failure (specify):

(9) Unknown

22. Shoulder Belt Upper Anchorage Adjustment 4

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):

(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other automatic belt failure (specify):

(9) Unknown

POLICE REPORTED RESTRAINT USE

28. Police Reported Belt Use 4

- (0) None used
 (1) Police did not indicate belt use
 (2) Shoulder belt
 (3) Lap belt
 (4) Lap and shoulder belt
 (5) Belt used, type not specified
 (6) Child safety seat
 (7) Automatic belt
 (8) Other type belt, (specify):

(9) Police indicated "unknown"

29. Police Reported Air Bag Availability/Function 2

- (0) No air bag available
 (1) Police did not indicate air bag availability/function
 (2) Deployed
 (3) Not deployed
 (4) Unknown if deployed
 (9) Police indicated "unknown"

Check the Primary Source Used In Determining Belt Use.

- ☐ Not equipped/not available/destroyed or rendered inoperative
☐ Vehicle inspection
☐ Official injury data
☒ Driver/occupant interview
☐ Other (specify):

☐ Unknown if belt used

AIR BAG SYSTEM FUNCTION

30. Frontal Air Bag System Availability/Function (This Occupant Position) 1

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

(3) Air bag not reinstalled

(9) Unknown

31. Frontal Air Bag System Deployment (This Occupant Position) 1

- (0) Not equipped/not available
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

(3) Air bag not reinstalled

(9) Unknown

Specify type of "other" air bag present:

33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) 0

- (0) Not equipped with an "other" air bag
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

34. Are There Indications of Air Bag System Failure? (This Occupant Position) 1

- (0) Not equipped/not available
 (1) No
 (2) Yes (specify):

(9) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 1

- (0) Not equipped/not available
(1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)
(3) One previous accident with deployment
(4) More than one previous accident with at least one deployment
(8) Previous accidents, unknown deployment status
(9) Unknown

36. Type of Air Bag 1

- (0) Not equipped/not available
(1) Original manufacturer installed system
(2) Retrofitted air bag
(3) Replacement air bag
(8) Unknown type of air bag
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 1

- (0) Not equipped/not available
(1) No prior maintenance
(2) Yes, prior maintenance (specify):
(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 01

- (00) Not equipped/not available
Code the accident event sequence number that initiated the air bag deployment
(96) Deployed, unknown event
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

39. CDC For Air Bag Deployment Impact 1

- (0) Not equipped/not available
(1) Highest delta V
(2) Second highest delta V
(3) Other non-coded delta V (specify):
(6) Deployed, unknown event
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact + 0.22

- (_ 000) Not equipped/not available
Code the value of the delta V for the impact that initiated the air bag deployment
(_ 996) Deployment, unknown longitudinal Delta V
(_ 997) Not deployed
(_ 998) Unknown if deployed
(_ 999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 2

- (0) Not equipped/not available
(1) No
(2) Yes
(3) Deployed, unknown if flap(s) opened at designated tear points
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 1

- (0) Not equipped/not available
(1) No
(2) Yes (specify):
(3) Deployed, unknown if air bag module cover flap(s) damaged
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

43. Was There Damage To The Air Bag? 01

- (00) Not equipped/not available
(01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
(03) Cut
(04) Torn
(05) Holed
(06) Burned
(07) Abraded
(88) Other damage (specify):

- (95) Damaged, details unknown
(96) Deployed, unknown if damaged
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM
EVALUATION *continued*44. Source of Air Bag Damage 01

(00) Not equipped/not available

(01) Not damaged

(02) Object worn by occupant, (specify):

(03) Object carried by occupant, (specify):

(04) Adaptive/assistive controls, (specify):

(05) Fire in vehicle

(06) Thermal burns

(07) Rescue or emergency efforts

(88) Other damage source (specify):

(95) Damaged, unknown source

(96) Deployed, unknown if damaged

(97) Not deployed

(98) Unknown if deployed

(99) Unknown

45. Was The Air Bag Tethered? 1

(0) Not equipped/not available

(1) No

(2) Yes (specify number of tether straps):

(3) Deployed, unknown if tethered

(7) Not deployed

(8) Unknown if deployed

(9) Unknown

46. Did The Air Bag Have Vent Ports? 2

(0) Not equipped/not available

(1) No

(2) Yes (specify number of vent ports):

(3) Deployed, unknown if vent ports present

(7) Not deployed

(8) Unknown if deployed

(9) Unknown

47. Was the Air Bag in this Occupant's Position
Contacted by Another Occupant? 1

(0) Not equipped/not available

(1) No

(2) Yes (specify):

(3) Deployed, unknown if other occupant contact
to air bag

(7) Not deployed

(8) Unknown if deployed

(9) Unknown

48. Was This Occupant Wearing Eye-wear? 2

(0) Not equipped/not available

(1) No

(2) Eyeglasses/sunglasses

(3) Contact lenses

(4) Deployed, unknown if eyewear worn

(7) Not deployed

(8) Unknown if deployed

(9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION

49. Head Restraint Type/Damage by Occupant
at This Occupant Position 3

(0) No head restraints

(1) Integral—no damage

(2) Integral—damaged during accident

(3) Adjustable—no damage

(4) Adjustable—damaged during accident

(5) Add-on—no damage

(6) Add-on—damaged during accident

(8) Other (specify):

(9) Unknown

50. Seat Type (this Occupant Position) 02

(00) Occupant not seated or no seat

(01) Bucket

(02) Bucket with folding back

(03) Bench

(04) Bench with separate back cushions

(05) Bench with folding back(s)

(06) Split bench with separate back cushions

(07) Split bench with folding back(s)

(08) Pedestal (i.e., column supported)

(09) Box mounted seat (i.e., van type)

(10) Other seat type (specify):

(99) Unknown

51. Seat Orientation (this Occupant Position) 1

(0) Occupant not seated or no seat

(1) Forward facing seat

(2) Rear facing seat

(3) Side facing seat (inward)

(4) Side facing seat (outward)

(8) Other (specify):

(9) Unknown

52. Seat Track Adjusted Position Prior To Impact 3

(0) Occupant not seated or no seat

(1) Non-adjustable seat track

Adjustable Seat Track

(2) Seat at forward most track position

(3) Seat between forward most and middle track
positions

(4) Seat at middle track position

(5) Seat between middle and rear most track
positions

(6) Seat at rear most track position

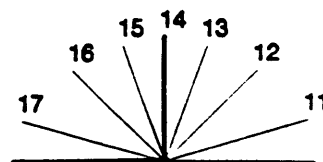
(9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 2 3

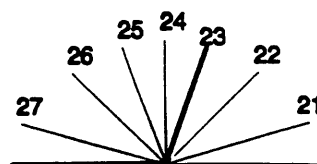
- (00) Occupant not seated or no seat
 (01) Not adjustable

Upright prior to impact

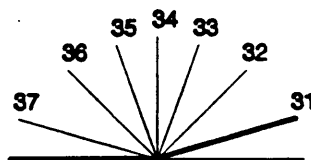
- (11) Moved to completely rearward position
 (12) Moved to rearward midrange position
 (13) Moved to slightly rearward position
 (14) Retained pre-impact position
 (15) Moved to slightly forward position
 (16) Moved to forward midrange position
 (17) Moved to completely forward position

*Slightly reclined prior to impact*

- (21) Moved to completely rearward position
 (22) Moved to rearward midrange position
 (23) Retained pre-impact position
 (24) Moved to upright position
 (25) Moved to slightly forward position
 (26) Moved to forward midrange position
 (27) Moved to completely forward position

*Completely reclined prior to impact*

- (31) Retained pre-impact position
 (32) Moved to rearward midrange position
 (33) Moved to slightly rearward position
 (34) Moved to upright position
 (35) Moved to slightly forward position
 (36) Moved to forward midrange position
 (37) Moved to completely forward position



(99) Unknown

54. Seat Performance (this Occupant Position) 1

- (0) Occupant not seated or no seat
 (1) No seat performance failure(s)
 (2) Seat adjusters failed
 (3) Seat back folding locks or "seat back" failed (specify): _____
 (4) Seat track/anchors failed
 (5) Deformed by impact of occupant
 (6) Deformed by passenger compartment intrusion, (specify): _____
 (7) Combination of above (specify): _____
 (8) Other (specify): _____
 (9) Unknown

CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat - with shield

(5) Booster seat - without shield

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 00

(00) No child safety seat

Designed for Rear Facing for This Age/Weight

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

Designed For Forward Facing for This Age/Weight

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0059. Child Safety Seat Shield Usage 0060. Child Safety Seat Tether Usage 00Note: Options below applicable to
Variables OA58-OA60.

(00) No child safety seat

Not Designed With Harness/Shield/Tether(01) After market harness/shield/tether
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market
harness/shield/tether added(09) Unknown if harness/shield/tether
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES**61. Injury Severity (Police Rating)** 0

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

62. Treatment - Mortality 6

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):

- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

63. Type Of Medical Facility (for Initial Treatment) 5

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

(9) Unknown

64. Hospital Stay 00

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

65. Working Days Lost 00

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP WORK HERE**VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

TO BE CODED BY THE ZONE CENTER**INJURY CONSEQUENCES****66. Time to Death**

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

(00) Not fatal

(96) Fatal - ruled disease

(99) Unknown

67. 1st Medically Reported Cause of Death**68. 2nd Medically Reported Cause of Death****69. 3rd Medically Reported Cause of Death**

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

(00) Not fatal or no additional causes

(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

70. Number of Recorded Injuries for This Occupant

Code the actual number of injuries recorded for this occupant.

(00) No recorded injuries

(97) Injured, details unknown

(99) Unknown if injured

TRAUMA DATA**71. Glasgow Coma Scale (GCS) Score (at Medical Facility)**

(00) Not injured

(01) Injured - not treated at medical facility

(02) No GCS Score at medical facility

(03-15) Code the actual value of the initial GCS Score recorded at medical facility.

(97) Injured, details unknown

(99) Unknown if injured

72. Was the Occupant Given Blood?

(1) No - blood not given

(2) Yes - blood given

(specify units):

(9) Unknown if blood given

73. Arterial Blood Gases (ABG) - HCO₃

(00) Not injured

(01) Injured, ABGs not measured or reported

(02-50) Code the actual value of the HCO₃(96) ABGs reported, HCO₃ unknown

(97) Injured, details unknown

(99) Unknown if injured

BELT USE DETERMINATION**74. Primary Source of Belt Use Determination**

(0) Not equipped/not available/destroyed or rendered inoperative

(1) Vehicle inspection

(2) Official injury data

(3) Driver/occupant interview

(8) Other (specify):

(9) Unknown if belt used

Appendix I:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE DRIVER



U.S. Department of Transportation
National Highway Traffic Safety
Administration

Form Approved
O.M.B. No. 2127-0021

OCCUPANT INJURY FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number	<u>10</u>	3. Vehicle Number	<u>01</u>
2. Case Number - Stratum	<u>9517</u>	4. Occupant Number	<u>01</u>

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	Body Region	A.I.S. - 90				Injury Source	Injury Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number													
		Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity																	
Burns to bilateral forearms cervical strain	5th	7	7	9	20	00	1	3	604	2	3	00										
	16th	7	6	4	02	78	1	6	170	2	2	00										
3rd	27		28		29		30		31		32		33		34		35		36		37	
4th	38		39		40		41		42		43		44		45		46		47		48	
5th	49		50		51		52		53		54		55		56		57		58		59	
6th	60		61		62		63		64		65		66		67		68		69		70	
7th	71		72		73		74		75		76		77		78		79		80		81	
8th	82		83		84		85		86		87		88		89		90		91		92	
9th	93		94		95		96		97		98		99		100		101		102		103	
10th	104		105		106		107		108		109		110		111		112		113		114	

OCCUPANT INJURY DATA

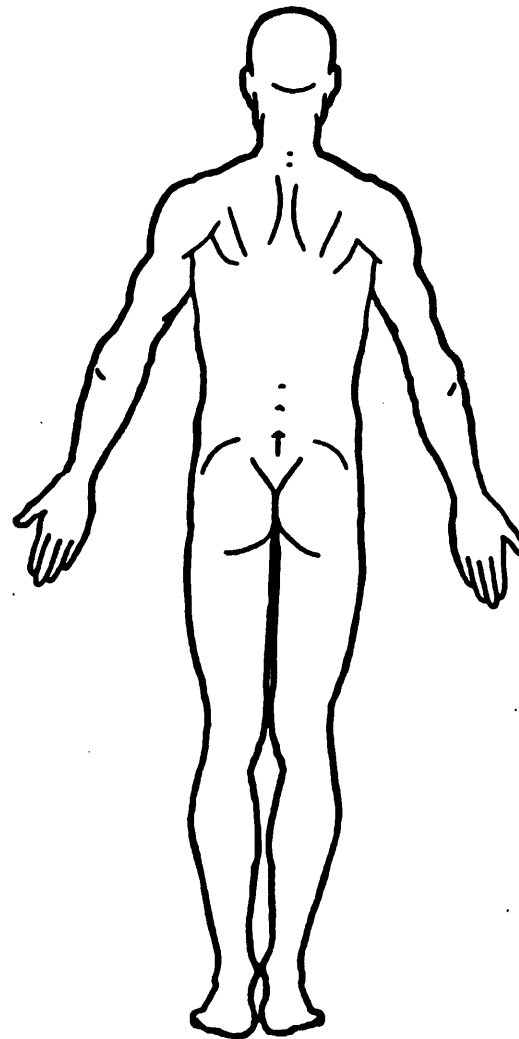
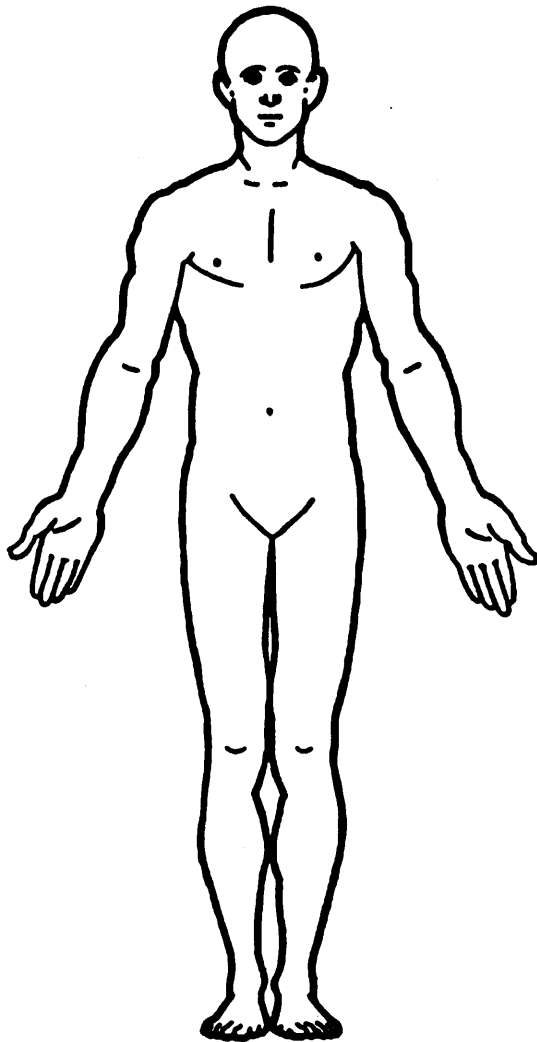
Source of Injury Data	A.I.S. - 90					Aspect	Injury Source	Injury Source Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion Number
	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity					
11th	---	---	---	---	---	---	-----	---	---	---
12th	---	---	---	---	---	---	-----	---	---	---
13th	---	---	---	---	---	---	-----	---	---	---
14th	---	---	---	---	---	---	-----	---	---	---
15th	---	---	---	---	---	---	-----	---	---	---
16th	---	---	---	---	---	---	-----	---	---	---
17th	---	---	---	---	---	---	-----	---	---	---
18th	---	---	---	---	---	---	-----	---	---	---
19th	---	---	---	---	---	---	-----	---	---	---
20th	---	---	---	---	---	---	-----	---	---	---
21st	---	---	---	---	---	---	-----	---	---	---
22nd	---	---	---	---	---	---	-----	---	---	---
23rd	---	---	---	---	---	---	-----	---	---	---
24th	---	---	---	---	---	---	-----	---	---	---
25th	---	---	---	---	---	---	-----	---	---	---

OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck	<u>Vessels, Nerves, Organs.</u>		(3) Bilateral
(4) Thorax	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(4) Central
(5) Abdomen		To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified	The exceptions to this rule apply to:		(9) Unknown
			(0) Whole region
Type of Anatomic Structure	<u>Whole Area</u>		
(1) Whole Area	(02) Skin - Abrasion		
(2) Vessels	(04) Skin - Contusion		
(3) Nerves	(06) Skin - Laceration		
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion		
(5) Skeletal (includes joints)	(10) Amputation		
(6) Head - LOC	(20) Burn		
(9) Skin	(30) Crush		
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		
		Abbreviated Injury Scale	
		(1) Minor Injury	
		(2) Moderate Injury	
		(3) Serious Injury	
		(4) Severe Injury	
		(5) Critical Injury	
		(6) Maximum (untreatable)	
		(7) Injured, unknown severity	
SOURCE OF INJURY DATA		INJURY SOURCE	DIRECT/INDIRECT INJURY
		CONFIDENCE LEVEL	
<u>OFFICIAL RECORDS</u>		(1) Certain	(1) Direct contact injury
(1) Autopsy records with or without hospital/medical records		(2) Probable	(2) Indirect contact injury
(2) Hospital/medical records other than emergency room (e.g., discharge summary)		(3) Possible	(3) Noncontact injury
(3) Emergency room records only (including associated X-rays or other lab reports)		(9) Unknown	(7) Injured, unknown source
(4) Private physician, walk-in or emergency clinic			
<u>UNOFFICIAL RECORDS</u>			
(5) Lay coroner report			
(6) E.M.S. personnel			
(7) Interviewee			
(8) Other source (specify):			
(9) Police			

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

___ No

___ Yes

Blood Alcohol
Level (mg/dl)

BAL = ____

Glasgow Coma
Scale Score

GCSS = ____

Units of Blood
Given

Units = ____

Arterial Blood
Gases

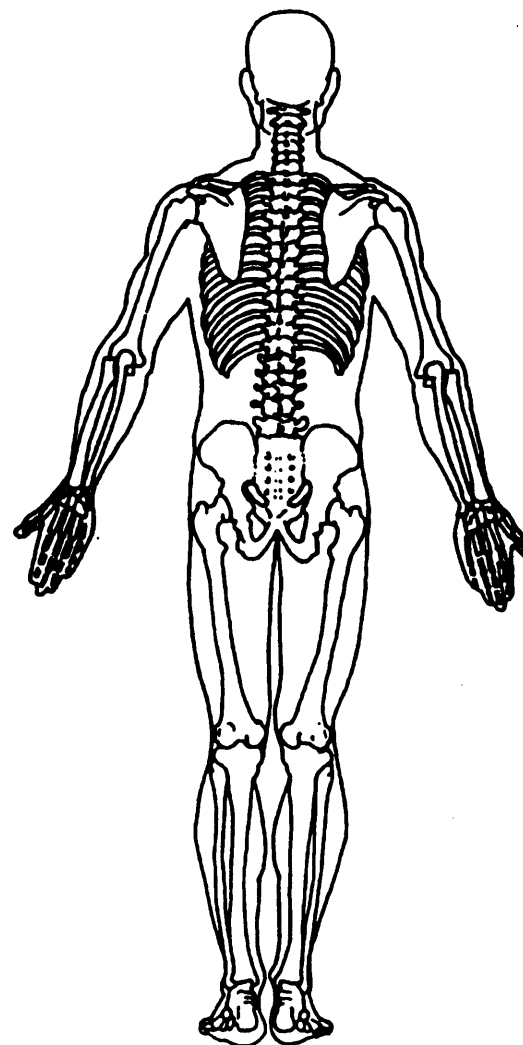
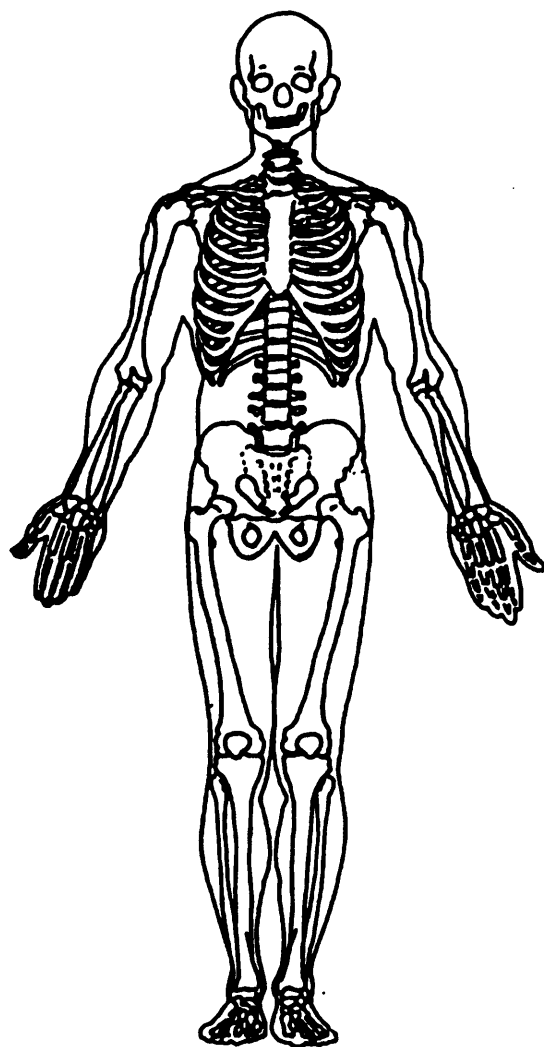
pH = ____

PO₂ = ____

PCO₂ ____

HCO₃ ____

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



INJURY SOURCES

FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify): _____
- (019) Other front object (specify): _____

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify): _____
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify): _____

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify): _____
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify): _____

INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify): _____
- (155) Head restraint system
- (160) Other occupants (specify): _____
- (161) Interior loose objects
- (162) Child safety seat (specify): _____
- (163) Other interior object (specify): _____

AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify): _____

- (195) Other air bag compartment cover (specify): _____

ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify): _____

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify): _____
- (409) Additional or relocated switches, (specify): _____

- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify): _____

EXTERIOR of OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify): _____
- (454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify): _____
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify): _____
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify): _____
- (514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

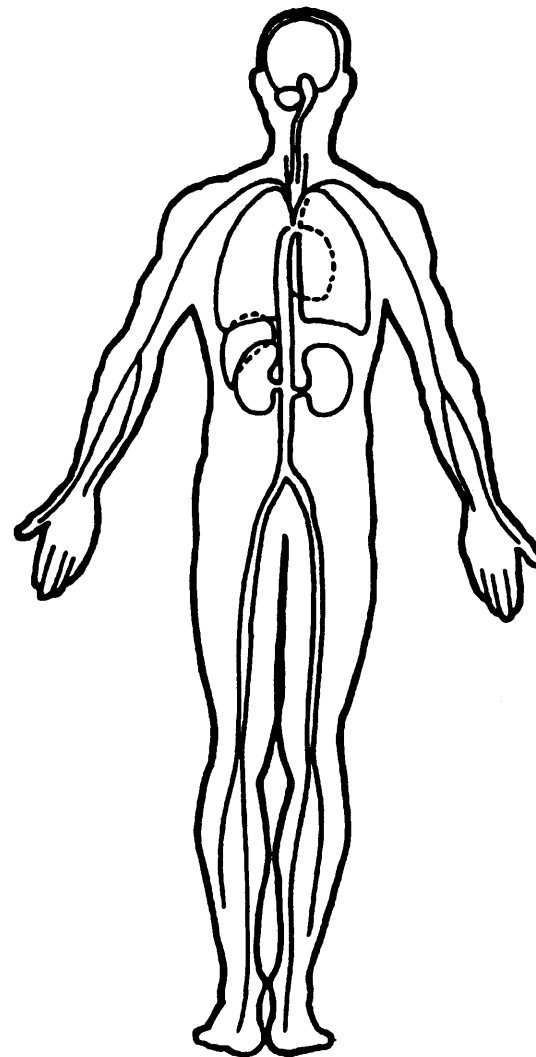
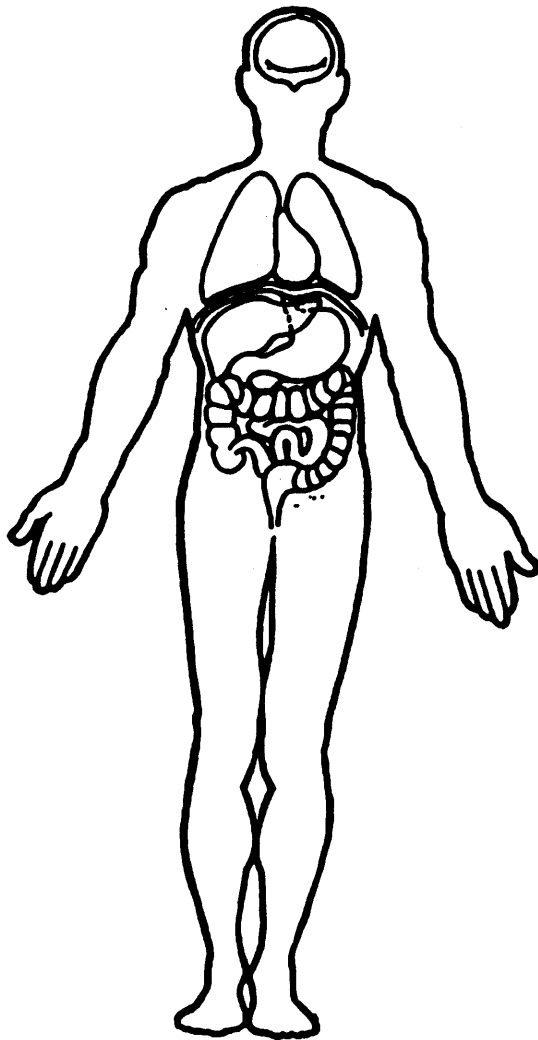
- (551) Ground
- (598) Other vehicle or object (specify): _____
- (599) Unknown vehicle or object

NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify): _____
- (604) Air bag exhaust gases
- (697) Injured, unknown source

OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



CAUSE OF DEATH

ICD-9-CM

OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
FX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
PN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

Appendix J:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE RIGHT FRONT PASSENGER



OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female-not reported pregnant

(3) Female-pregnant-1st trimester(1st-3rd month)

(4) Female-pregnant-2nd trimester(4th-6th month)

(5) Female-pregnant-3rd trimester(7th-9th month)

(6) Female-pregnant-term unknown

(9) Unknown

7. Occupant's Height

Code actual height to the nearest centimeter.

(999) Unknown

166 inches X 2.54 = 167.64 centimeters

8. Occupant's Weight

Code actual weight to the nearest kilogram.

(999)Unknown

170 pounds X .4536 = 77 kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position

Front Seat

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front of seat

(8) Other abnormal posture (specify):

(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____
- (5) Integral structure
- (8) Other medium (specify): _____
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.
(specify): _____
- (9) Unknown

17. Occupant Mobility 3

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):

(9) Unknown

19. Manual (Active) Belt System Use 0 0

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of manual belt system (specify):

(9) Unknown

21. Manual (Active) Belt Failure Modes During Accident 0

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

(6) Broken retractor

(7) Combination of above (specify):

(8) Other manual belt failure (specify):

(9) Unknown

22. Shoulder Belt Upper Anchorage Adjustment 2

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):

(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

(6) Broken retractor

(7) Combination of above (specify):

(8) Other automatic belt failure (specify):

(9) Unknown

POLICE REPORTED RESTRAINT USE

AIR BAG SYSTEM FUNCTION

28. Police Reported Belt Use 6

- (0) None used
 (1) Police did not indicate belt use
 (2) Shoulder belt
 (3) Lap belt
 (4) Lap and shoulder belt
 (5) Belt used, type not specified
 (6) Child safety seat
 (7) Automatic belt
 (8) Other type belt, (specify):
 (9) Police indicated "unknown"

29. Police Reported Air Bag Availability/Function 2

- (0) No air bag available
 (1) Police did not indicate air bag availability/function
 (2) Deployed
 (3) Not deployed
 (4) Unknown if deployed
 (9) Police indicated "unknown"

Check the Primary Source Used In Determining Belt Use.

- [] Not equipped/not available/destroyed or rendered inoperative
 [] Vehicle inspection
 [] Official injury data
 [X] Driver/occupant interview
 [] Other (specify):

[] Unknown if belt used

30. Frontal Air Bag System Availability/Function (This Occupant Position) 1

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

- (3) Air bag not reinstalled
 (9) Unknown

31. Frontal Air Bag System Deployment (This Occupant Position) 1

- (0) Not equipped/not available
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

- (3) Air bag not reinstalled
 (9) Unknown

Specify type of "other" air bag present:

33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) 0

- (0) Not equipped with an "other" air bag
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

34. Are There Indications of Air Bag System Failure? (This Occupant Position) 2

- (0) Not equipped/not available

(1) No

(2) Yes (specify):

(9) Unknown

Bag tore during deployment

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 1

- (0) Not equipped/not available
(1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)
(3) One previous accident with deployment
(4) More than one previous accident with at least one deployment
(8) Previous accidents, unknown deployment status
(9) Unknown

36. Type of Air Bag 1

- (0) Not equipped/not available
(1) Original manufacturer installed system
(2) Retrofitted air bag
(3) Replacement air bag
(8) Unknown type of air bag
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 1

- (0) Not equipped/not available
(1) No prior maintenance
(2) Yes, prior maintenance (specify):
(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 01

- (00) Not equipped/not available
Code the accident event sequence number that initiated the air bag deployment
(96) Deployed, unknown event
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

39. CDC For Air Bag Deployment Impact 1

- (0) Not equipped/not available
(1) Highest delta V
(2) Second highest delta V
(3) Other non-coded delta V (specify):
(6) Deployed, unknown event
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact + 0 2 2

- (_000) Not equipped/not available
Code the value of the delta V for the impact that initiated the air bag deployment
(_996) Deployment, unknown longitudinal Delta V
(_997) Not deployed
(_998) Unknown if deployed
(_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 2

- (0) Not equipped/not available
(1) No
(2) Yes
(3) Deployed, unknown if flap(s) opened at designated tear points
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 1

- (0) Not equipped/not available
(1) No
(2) Yes (specify):
(3) Deployed, unknown if air bag module cover flap(s) damaged
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

43. Was There Damage To The Air Bag? 04

- (00) Not equipped/not available
(01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
(03) Cut
(04) Torn
(05) Holed
(06) Burned
(07) Abraded
(88) Other damage (specify):

- (95) Damaged, details unknown
(96) Deployed, unknown if damaged
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM
EVALUATION *continued*

44. Source of Air Bag Damage 88
 (00) Not equipped/not available
 (01) Not damaged
 (02) Object worn by occupant, (specify):
 (03) Object carried by occupant, (specify):
 (04) Adaptive/assistive controls, (specify):
 (05) Fire in vehicle
 (06) Thermal burns
 (07) Rescue or emergency efforts
 (88) Other damage source (specify):
BRACKET SCREWS
 (95) Damaged, unknown source
 (96) Deployed, unknown if damaged
 (97) Not deployed
 (98) Unknown if deployed
 (99) Unknown
45. Was The Air Bag Tethered? 1
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify number of tether straps):
 (3) Deployed, unknown if tethered
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
46. Did The Air Bag Have Vent Ports? 2
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify number of vent ports):
2
 (3) Deployed, unknown if vent ports present
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 1
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify):
 (3) Deployed, unknown if other occupant contact to air bag
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
48. Was This Occupant Wearing Eye-wear? 2
 (0) Not equipped/not available
 (1) No
 (2) Eyeglasses/sunglasses
 (3) Contact lenses
 (4) Deployed, unknown if eyewear worn
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION

49. Head Restraint Type/Damage by Occupant at This Occupant Position 3
 (0) No head restraints
 (1) Integral—no damage
 (2) Integral—damaged during accident
 (3) Adjustable—no damage
 (4) Adjustable—damaged during accident
 (5) Add-on—no damage
 (6) Add-on—damaged during accident
 (8) Other (specify):
 (9) Unknown
50. Seat Type (this Occupant Position) 02
 (00) Occupant not seated or no seat
 (01) Bucket
 (02) Bucket with folding back
 (03) Bench
 (04) Bench with separate back cushions
 (05) Bench with folding back(s)
 (06) Split bench with separate back cushions
 (07) Split bench with folding back(s)
 (08) Pedestal (i.e., column supported)
 (09) Box mounted seat (i.e., van type)
 (10) Other seat type (specify):
 (99) Unknown
51. Seat Orientation (this Occupant Position) 1
 (0) Occupant not seated or no seat
 (1) Forward facing seat
 (2) Rear facing seat
 (3) Side facing seat (inward)
 (4) Side facing seat (outward)
 (8) Other (specify):
 (9) Unknown
52. Seat Track Adjusted Position Prior To Impact 5
 (0) Occupant not seated or no seat
 (1) Non-adjustable seat track
- Adjustable Seat Track*
 (2) Seat at forward most track position
 (3) Seat between forward most and middle track positions
 (4) Seat at middle track position
 (5) Seat between middle and rear most track positions
 (6) Seat at rear most track position
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 23

- (00) Occupant not seated or no seat
 (01) Not adjustable

Upright prior to impact

- (11) Moved to completely rearward position
 (12) Moved to rearward midrange position
 (13) Moved to slightly rearward position
 (14) Retained pre-impact position
 (15) Moved to slightly forward position
 (16) Moved to forward midrange position
 (17) Moved to completely forward position

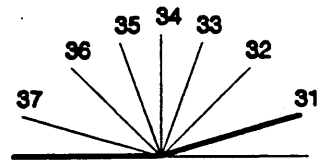
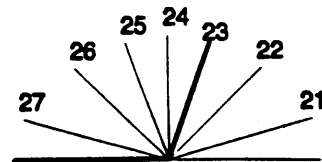
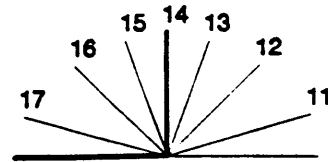
Slightly reclined prior to impact

- (21) Moved to completely rearward position
 (22) Moved to rearward midrange position
 (23) Retained pre-impact position
 (24) Moved to upright position
 (25) Moved to slightly forward position
 (26) Moved to forward midrange position
 (27) Moved to completely forward position

Completely reclined prior to impact

- (31) Retained pre-impact position
 (32) Moved to rearward midrange position
 (33) Moved to slightly rearward position
 (34) Moved to upright position
 (35) Moved to slightly forward position
 (36) Moved to forward midrange position
 (37) Moved to completely forward position

(99) Unknown

54. Seat Performance (this Occupant Position) 1

- (0) Occupant not seated or no seat
 (1) No seat performance failure(s)
 (2) Seat adjusters failed
 (3) Seat back folding locks or "seat back" failed (specify): _____
 (4) Seat track/anchors failed
 (5) Deformed by impact of occupant
 (6) Deformed by passenger compartment intrusion, (specify): _____
 (7) Combination of above (specify): _____
 (8) Other (specify): _____
 (9) Unknown

CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 0 0 0

(000) No child safety seat

Applicable codes are found in your NASS CDS
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat - with shield

(5) Booster seat - without shield

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 0 0

(00) No child safety seat

Designed for Rear Facing for This Age/Weight

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

Designed For Forward Facing for This Age/Weight

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0 059. Child Safety Seat Shield Usage 0 060. Child Safety Seat Tether Usage 0 0Note: Options below applicable to
Variables OA58-OA60.

(00) No child safety seat

Not Designed With Harness/Shield/Tether(01) After market harness/shield/tether
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market
harness/shield/tether added(09) Unknown if harness/shield/tether
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES**61. Injury Severity (Police Rating)** 2

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

62. Treatment - Mortality 4

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):

- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

63. Type Of Medical Facility (for Initial Treatment) 2

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

- (9) Unknown

64. Hospital Stay 00

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

65. Working Days Lost 01

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP WORK HERE**VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

TO BE CODED BY THE ZONE CENTER**INJURY CONSEQUENCES****66. Time to Death** 00

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal
(96) Fatal - ruled disease
(99) Unknown

67. 1st Medically Reported Cause of Death 00**68. 2nd Medically Reported Cause of Death** 00**69. 3rd Medically Reported Cause of Death** 00

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

70. Number of Recorded Injuries for This Occupant 02

2 Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries
(97) Injured, details unknown
(99) Unknown if injured

TRAUMA DATA**71. Glasgow Coma Scale (GCS) Score** 02

(at Medical Facility)

- (00) Not injured
(01) Injured - not treated at medical facility
(02) No GCS Score at medical facility
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.
(97) Injured, details unknown
(99) Unknown if injured

72. Was the Occupant Given Blood? 1

- (1) No - blood not given
(2) Yes - blood given

(specify units):

- (9) Unknown if blood given

73. Arterial Blood Gases (ABG) - HCO₃ 01

- (00) Not injured
(01) Injured, ABGs not measured or reported
(02-50) Code the actual value of the HCO₃
(96) ABGs reported, HCO₃ unknown
(97) Injured, details unknown
(99) Unknown if injured

BELT USE DETERMINATION**74. Primary Source of Belt Use Determination** 3

(0) Not equipped/not available/destroyed or rendered inoperative

- (1) Vehicle inspection
(2) Official injury data
(3) Driver/occupant interview
(8) Other (specify):
(9) Unknown if belt used

Appendix K:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE RIGHT FRONT PASSENGER



U.S. Department of Transportation
National Highway Traffic Safety
Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

01

2. Case Number - Stratum

9517

4. Occupant Number

02

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Source of Injury Data	Body Region	A.I.S. - 90				Injury Source	Injury Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number		
		Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity						
Abrasion 1st forehead	5. <u>7</u>	6. <u>1</u>	7. <u>9</u>	8. <u>02</u>	9. <u>02</u>	10. <u>1</u>	11. <u>7</u>	12. <u>001</u>	13. <u>1</u>	14. <u>1</u>	15. <u>00</u>
Laceration 2nd to finger	16. <u>7</u>	17. <u>7</u>	18. <u>9</u>	19. <u>06</u>	20. <u>00</u>	21. <u>1</u>	22. <u>2</u>	23. <u>001</u>	24. <u>2</u>	25. <u>1</u>	26. <u>00</u>
3rd	27. ____	28. ____	29. ____	30. ____	31. ____	32. ____	33. ____	34. ____	35. ____	36. ____	37. ____
4th	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____	45. ____	46. ____	47. ____	48. ____
5th	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____	55. ____	56. ____	57. ____	58. ____	59. ____
6th	60. ____	61. ____	62. ____	63. ____	64. ____	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____

OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck	<u>Vessels, Nerves, Organs.</u>	To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(3) Bilateral
(4) Thorax	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(4) Central
(5) Abdomen	The exceptions to this rule apply to:		(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified			(9) Unknown
			(0) Whole region
Type of Anatomic Structure	<u>Whole Area</u>	Abbreviated Injury Scale	
(1) Whole Area	(02) Skin - Abrasion		
(2) Vessels	(04) Skin - Contusion	(1) Minor Injury	(2) Moderate Injury
(3) Nerves	(06) Skin - Laceration		
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion	(3) Serious Injury	(4) Severe Injury
(5) Skeletal (includes joints)	(10) Amputation	(5) Critical Injury	(5) Critical Injury
(6) Head - LOC	(20) Burn	(6) Maximum (untreatable)	(6) Maximum (untreatable)
(9) Skin	(30) Crush	(7) Injured, unknown severity	(7) Injured, unknown severity
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		

SOURCE OF INJURY DATA**INJURY SOURCE****DIRECT/INDIRECT INJURY****CONFIDENCE LEVEL**OFFICIAL RECORDS

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

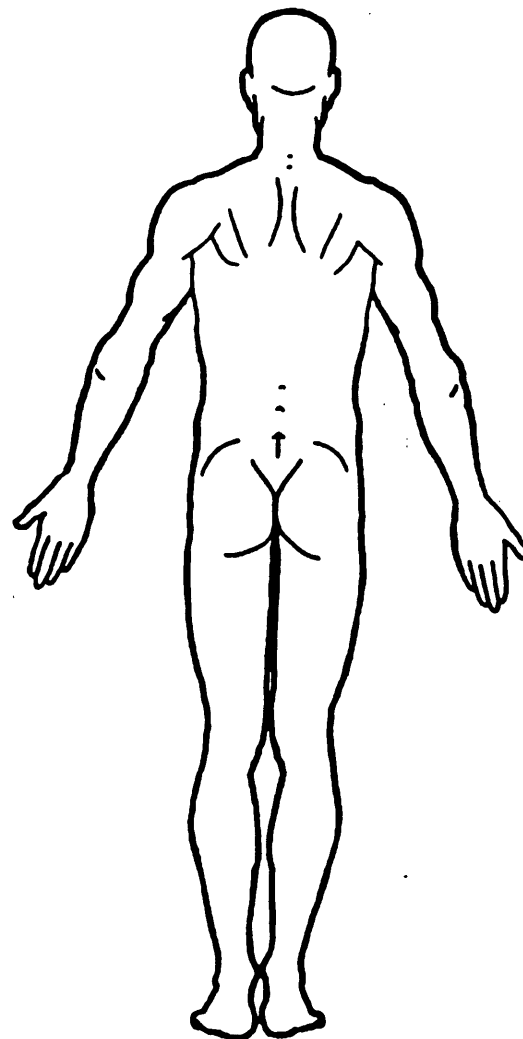
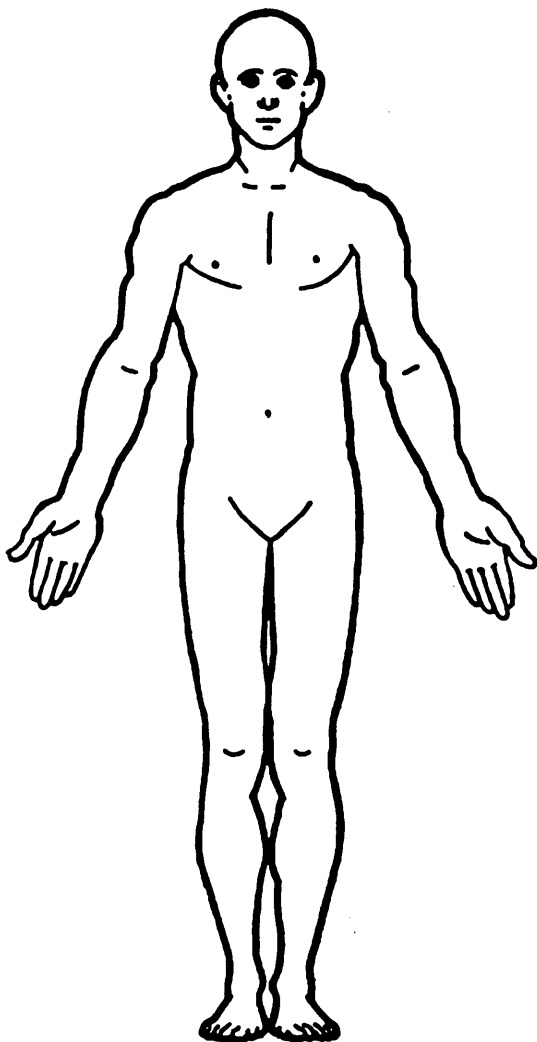
- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): _____
- (9) Police

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

___ No

___ Yes

Blood Alcohol
Level (mg/dl)

BAL = ___

Glasgow Coma
Scale Score

GCSS = ___

Units of Blood
Given

Units = ___

Arterial Blood
Gases

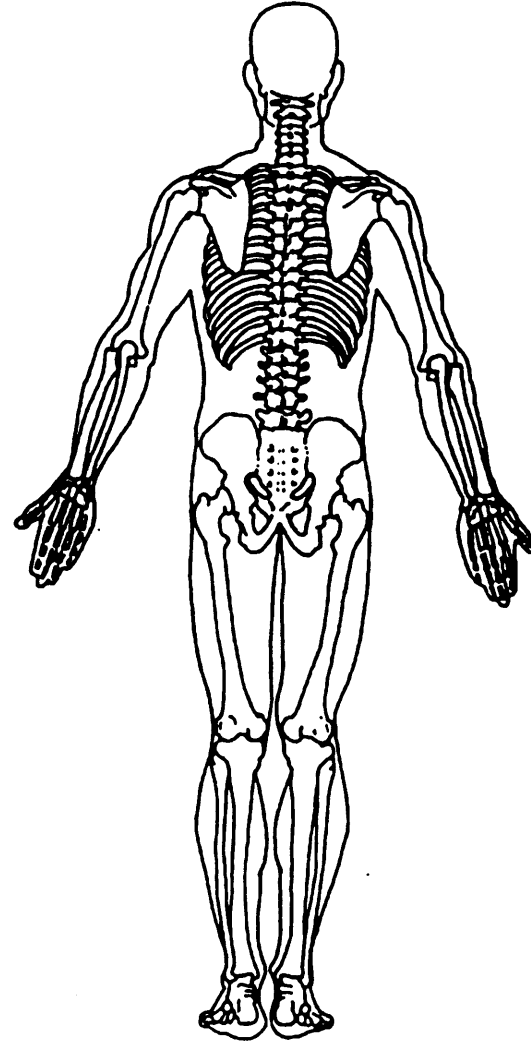
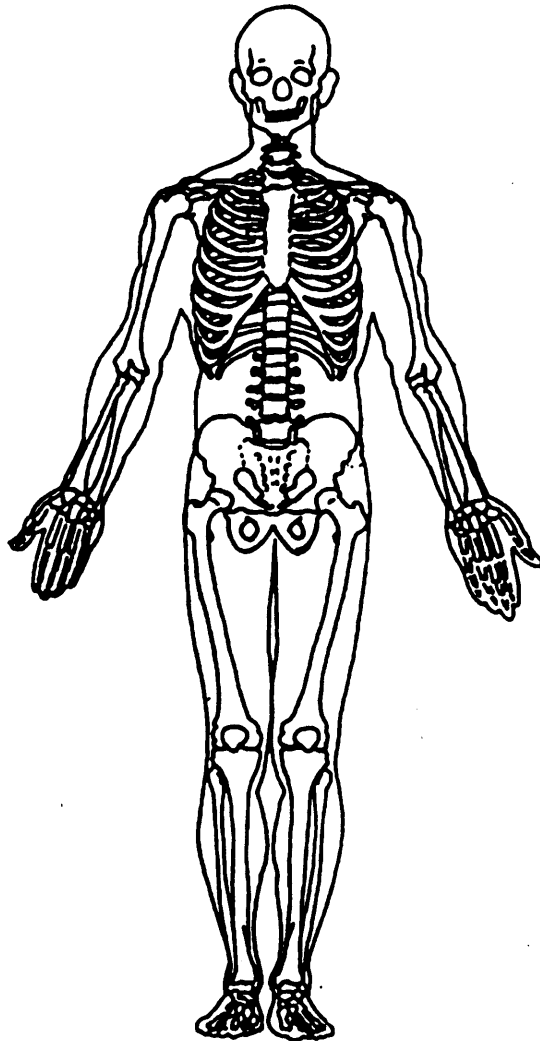
pH = ___

PO₂ = ___

PCO₂ = ___

HCO₃ = ___

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



INJURY SOURCES

FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify): _____
- (019) Other front object (specify): _____

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify): _____
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify): _____

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify): _____
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify): _____

INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify): _____
- (155) Head restraint system
- (160) Other occupants (specify): _____
- (161) Interior loose objects
- (162) Child safety seat (specify): _____
- (163) Other interior object (specify): _____

AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify): _____
- (195) Other air bag compartment cover (specify): _____

ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top

FLOOR

- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify): _____

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify): _____
- (409) Additional or relocated switches, (specify): _____
- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify): _____

EXTERIOR of OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify): _____
- (454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify): _____
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify): _____
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify): _____
- (514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

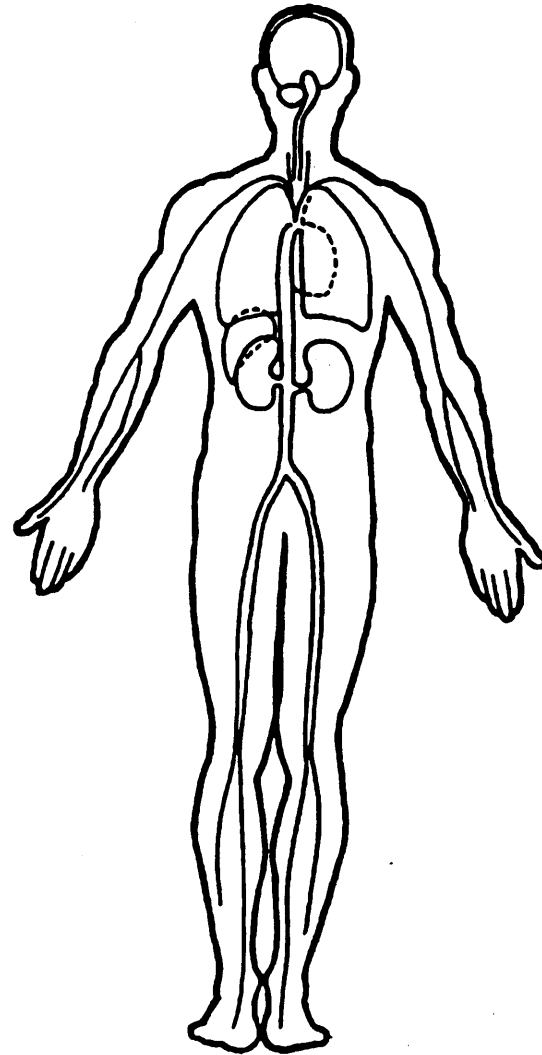
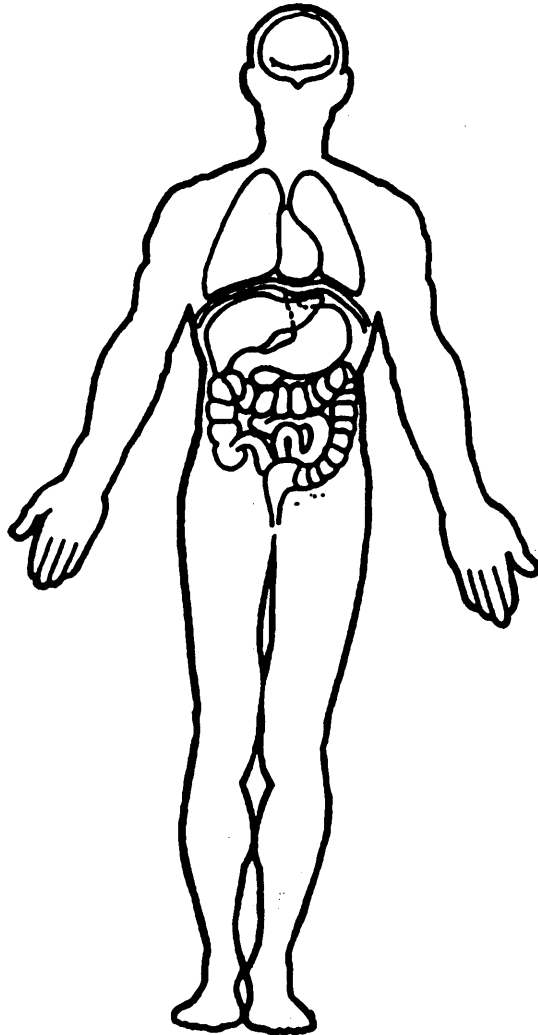
- (551) Ground
- (598) Other vehicle or object (specify): _____
- (599) Unknown vehicle or object

NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify): _____
- (604) Air bag exhaust gases
- (697) Injured, unknown source

OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



CAUSE OF DEATH

ICD-9-CM

OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
FX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
PN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

Appendix L:

NASS CDS OCCUPANT ASSESSMENT FORM:

CASE VEHICLE RIGHT REAR PASSENGER



U.S. Department of Transportation
National Highway Traffic Safety
Administration

OCCUPANT ASSESSMENT FORM

Form Approved
O.M.B. No. 2127-0021

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female-not reported pregnant

(3) Female-pregnant-1st trimester(1st-3rd month)

(4) Female-pregnant-2nd trimester(4th-6th month)

(5) Female-pregnant-3rd trimester(7th-9th month)

(6) Female-pregnant-term unknown

(9) Unknown

7. Occupant's Height

Code actual height to the nearest
centimeter.

(999) Unknown

62 inches X 2.54 = 157.48 centimeters

8. Occupant's Weight

Code actual weight to the nearest
kilogram.

(999) Unknown

130 pounds X .4536 = 58.96 kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position

Front Seat

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front
of seat

(8) Other abnormal posture (specify):

(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection 0

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

13. Ejection Area 0

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

14. Ejection Medium 0

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____
- (5) Integral structure
- (8) Other medium (specify): _____
- (9) Unknown

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.
(specify): _____
- (9) Unknown

17. Occupant Mobility 4

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 7

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify):

(9) Unknown

19. Manual (Active) Belt System Use 00

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify):

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify):

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify):
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of manual belt system (specify):

(9) Unknown

21. Manual (Active) Belt Failure Modes During Accident 0

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):

(8) Other manual belt failure (specify):

(9) Unknown

22. Shoulder Belt Upper Anchorage Adjustment 1

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):

(9) Unknown

27. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify):

- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other automatic belt failure (specify):

(9) Unknown

POLICE REPORTED RESTRAINT USE

28. Police Reported Belt Use 3

- (0) None used
 (1) Police did not indicate belt use
 (2) Shoulder belt
 (3) Lap belt
 (4) Lap and shoulder belt
 (5) Belt used, type not specified
 (6) Child safety seat
 (7) Automatic belt
 (8) Other type belt, (specify):

(9) Police indicated "unknown"

29. Police Reported Air Bag Availability/Function 0

- (0) No air bag available
 (1) Police did not indicate air bag availability/function
 (2) Deployed
 (3) Not deployed
 (4) Unknown if deployed
 (9) Police indicated "unknown"

Check the Primary Source Used In Determining Belt Use.

- ☐ Not equipped/not available/destroyed or rendered inoperative
☐ Vehicle inspection
☐ Official injury data
☒ Driver/occupant interview
☐ Other (specify):

☐ Unknown if belt used

AIR BAG SYSTEM FUNCTION

30. Frontal Air Bag System Availability/Function (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

- (3) Air bag not reinstalled
 (9) Unknown

31. Frontal Air Bag System Deployment (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

- (3) Air bag not reinstalled
 (9) Unknown

Specify type of "other" air bag present:

33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) 0

- (0) Not equipped with an "other" air bag
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

34. Are There Indications of Air Bag System Failure? (This Occupant Position) 0

- (0) Not equipped/not available
 (1) No
 (2) Yes (specify):

(9) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 0

- (0) Not equipped/not available
(1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)
(3) One previous accident with deployment
(4) More than one previous accident with at least one deployment
(8) Previous accidents, unknown deployment status
(9) Unknown

36. Type of Air Bag 0

- (0) Not equipped/not available
(1) Original manufacturer installed system
(2) Retrofitted air bag
(3) Replacement air bag
(8) Unknown type of air bag
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 0

- (0) Not equipped/not available
(1) No prior maintenance
(2) Yes, prior maintenance (specify): _____

(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 00

- (00) Not equipped/not available
_____ Code the accident event sequence number that initiated the air bag deployment

- (96) Deployed, unknown event
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

39. CDC For Air Bag Deployment Impact 0

- (0) Not equipped/not available
(1) Highest delta V
(2) Second highest delta V
(3) Other non-coded delta V (specify): _____

- (6) Deployed, unknown event
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact + 000

(_000) Not equipped/not available

Code the value of the delta V for the impact that initiated the air bag deployment

(_996) Deployment, unknown longitudinal Delta V

(_997) Not deployed

(_998) Unknown if deployed

(_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 0

- (0) Not equipped/not available
(1) No
(2) Yes
(3) Deployed, unknown if flap(s) opened at designated tear points
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 0

- (0) Not equipped/not available
(1) No
(2) Yes (specify): _____
(3) Deployed, unknown if air bag module cover flap(s) damaged
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

43. Was There Damage To The Air Bag? 00

- (00) Not equipped/not available
(01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
(03) Cut
(04) Torn
(05) Holed
(06) Burned
(07) Abraded
(88) Other damage (specify): _____

- (95) Damaged, details unknown
(96) Deployed, unknown if damaged
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

**FIRST SEAT FRONTAL AIR BAG SYSTEM
EVALUATION** *continued*

44. Source of Air Bag Damage 00
 (00) Not equipped/not available
 (01) Not damaged
 (02) Object worn by occupant, (specify):
 (03) Object carried by occupant, (specify):
 (04) Adaptive/assistive controls, (specify):
 (05) Fire in vehicle
 (06) Thermal burns
 (07) Rescue or emergency efforts
 (88) Other damage source (specify):
 (95) Damaged, unknown source
 (96) Deployed, unknown if damaged
 (97) Not deployed
 (98) Unknown if deployed
 (99) Unknown
45. Was The Air Bag Tethered? 0
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify number of tether straps):
 (3) Deployed, unknown if tethered
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
46. Did The Air Bag Have Vent Ports? 0
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify number of vent ports):
 (3) Deployed, unknown if vent ports present
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 0
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify):
 (3) Deployed, unknown if other occupant contact to air bag
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
48. Was This Occupant Wearing Eye-wear? 0
 (0) Not equipped/not available
 (1) No
 (2) Eyeglasses/sunglasses
 (3) Contact lenses
 (4) Deployed, unknown if eyewear worn
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION

49. Head Restraint Type/Damage by Occupant at This Occupant Position 3
 (0) No head restraints
 (1) Integral—no damage
 (2) Integral—damaged during accident
 (3) Adjustable—no damage
 (4) Adjustable—damaged during accident
 (5) Add-on—no damage
 (6) Add-on—damaged during accident
 (8) Other (specify):
 (9) Unknown
50. Seat Type (this Occupant Position) 03
 (00) Occupant not seated or no seat
 (01) Bucket
 (02) Bucket with folding back
 (03) Bench
 (04) Bench with separate back cushions
 (05) Bench with folding back(s)
 (06) Split bench with separate back cushions
 (07) Split bench with folding back(s)
 (08) Pedestal (i.e., column supported)
 (09) Box mounted seat (i.e., van type)
 (10) Other seat type (specify):
 (99) Unknown
51. Seat Orientation (this Occupant Position) 1
 (0) Occupant not seated or no seat
 (1) Forward facing seat
 (2) Rear facing seat
 (3) Side facing seat (inward)
 (4) Side facing seat (outward)
 (8) Other (specify):
 (9) Unknown
52. Seat Track Adjusted Position Prior To Impact 1
 (0) Occupant not seated or no seat
 (1) Non-adjustable seat track
- Adjustable Seat Track*
 (2) Seat at forward most track position
 (3) Seat between forward most and middle track positions
 (4) Seat at middle track position
 (5) Seat between middle and rear most track positions
 (6) Seat at rear most track position
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 01

- (00) Occupant not seated or no seat
 (01) Not adjustable

Upright prior to impact

- (11) Moved to completely rearward position
 (12) Moved to rearward midrange position
 (13) Moved to slightly rearward position
 (14) Retained pre-impact position
 (15) Moved to slightly forward position
 (16) Moved to forward midrange position
 (17) Moved to completely forward position

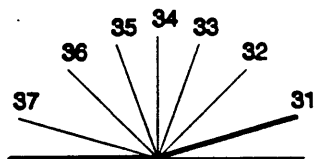
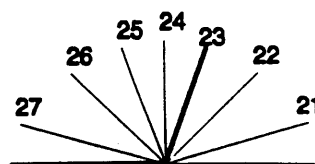
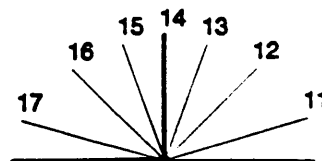
Slightly reclined prior to impact

- (21) Moved to completely rearward position
 (22) Moved to rearward midrange position
 (23) Retained pre-impact position
 (24) Moved to upright position
 (25) Moved to slightly forward position
 (26) Moved to forward midrange position
 (27) Moved to completely forward position

Completely reclined prior to impact

- (31) Retained pre-impact position
 (32) Moved to rearward midrange position
 (33) Moved to slightly rearward position
 (34) Moved to upright position
 (35) Moved to slightly forward position
 (36) Moved to forward midrange position
 (37) Moved to completely forward position

(99) Unknown

54. Seat Performance (this Occupant Position) 1

- (0) Occupant not seated or no seat
 (1) No seat performance failure(s)
 (2) Seat adjusters failed
 (3) Seat back folding locks or "seat back" failed
 (specify): _____
 (4) Seat track/anchors failed
 (5) Deformed by impact of occupant
 (6) Deformed by passenger compartment intrusion, (specify): _____
 (7) Combination of above (specify): _____
 (8) Other (specify): _____
 (9) Unknown

CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 000

(000) No child safety seat

Applicable codes are found in your NASS CDS
Data Collection, Coding and Editing

(950) Built-in child safety seat

(997) Other make/model (specify):

(998) Unknown make/model

(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0

(0) No child safety seat

(1) Infant seat

(2) Toddler seat

(3) Convertible seat

(4) Booster seat - with shield

(5) Booster seat - without shield

(7) Other type child safety seat (specify):

(8) Unknown child safety seat type

(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 00

(00) No child safety seat

Designed for Rear Facing for This Age/Weight

(01) Rear facing

(02) Forward facing

(08) Other orientation (specify):

(09) Unknown orientation

Designed For Forward Facing for This Age/Weight

(11) Rear facing

(12) Forward facing

(18) Other orientation (specify):

(19) Unknown orientation

*Unknown Design or Orientation For This
Age/Weight, or Unknown Age/Weight*

(21) Rear facing

(22) Forward facing

(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 0059. Child Safety Seat Shield Usage 0060. Child Safety Seat Tether Usage 00Note: Options below applicable to
Variables OA58-OA60.

(00) No child safety seat

Not Designed With Harness/Shield/Tether(01) After market harness/shield/tether
added, not used

(02) After market harness/shield/tether used

(03) Child safety seat used, but no after market
harness/shield/tether added(09) Unknown if harness/shield/tether
added or used*Designed With Harness/Shield/Tether*

(11) Harness/shield/tether not used

(12) Harness/shield/tether used

(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used

(22) Harness/shield/tether used

(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES**61. Injury Severity (Police Rating)** 0

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

62. Treatment - Mortality 0

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):

- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

63. Type Of Medical Facility (for Initial Treatment) 0

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

- (9) Unknown

64. Hospital Stay 00

- (00) Not Hospitalized
_____ Code the number of days (up through 60)
that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

65. Working Days Lost 97

- _____ Code the number of days
(up through 60) that the occupant
lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP WORK HERE**VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

TO BE CODED BY THE ZONE CENTER**INJURY CONSEQUENCES****66. Time to Death** 00

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal
(96) Fatal - ruled disease
(99) Unknown

67. 1st Medically Reported Cause of Death 00**68. 2nd Medically Reported Cause of Death** 00**69. 3rd Medically Reported Cause of Death** 00

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

70. Number of Recorded Injuries for This Occupant 01

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries
(97) Injured, details unknown
(99) Unknown if injured

TRAUMA DATA**71. Glasgow Coma Scale (GCS) Score** 01
(at Medical Facility)

- (00) Not injured
(01) Injured - not treated at medical facility
(02) No GCS Score at medical facility
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.
(97) Injured, details unknown
(99) Unknown if injured

72. Was the Occupant Given Blood? 1

- (1) No - blood not given
(2) Yes - blood given
(specify units):
(9) Unknown if blood given

73. Arterial Blood Gases (ABG) - HCO₃ 01

- (00) Not injured
(01) Injured, ABGs not measured or reported
(02-50) Code the actual value of the HCO₃
(96) ABGs reported, HCO₃ unknown
(97) Injured, details unknown
(99) Unknown if injured

BELT USE DETERMINATION**74. Primary Source of Belt Use Determination** 3

- (0) Not equipped/not available/destroyed or rendered inoperative
(1) Vehicle inspection
(2) Official injury data
(3) Driver/occupant interview
(8) Other (specify):
(9) Unknown if belt used

Appendix M:

NASS CDS OCCUPANT INJURY FORM:

CASE VEHICLE RIGHT REAR PASSENGER



U.S. Department of Transportation
National Highway Traffic Safety
Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number 10
2. Case Number - Stratum 9517

3. Vehicle Number 01
4. Occupant Number 03

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

Injury
Calf

Source of Injury Data	Body Region	A.I.S. - 90				Injury Source	Injury Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number		
		Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity						
1st	5. <u>7</u>	6. <u>8</u>	7. <u>9</u>	8. <u>00</u>	9. <u>99</u>	10. <u>1</u>	11. <u>1</u>	12. <u>101</u>	13. <u>3</u>	14. <u>1</u>	15. <u>00</u>
2nd	16. ____	17. ____	18. ____	19. ____	20. ____	21. ____	22. ____	23. ____	24. ____	25. ____	26. ____
3rd	27. ____	28. ____	29. ____	30. ____	31. ____	32. ____	33. ____	34. ____	35. ____	36. ____	37. ____
4th	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____	45. ____	46. ____	47. ____	48. ____
5th	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____	55. ____	56. ____	57. ____	58. ____	59. ____
6th	60. ____	61. ____	62. ____	63. ____	64. ____	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____

OCCUPANT INJURY DATA

[illegible]

OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck	<u>Vessels, Nerves, Organs.</u>	To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(3) Bilateral
(4) Thorax	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(4) Central
(5) Abdomen		The exceptions to this rule apply to:	(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity		The exceptions to this rule apply to:	(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified			(9) Unknown
			(0) Whole region
Type of Anatomic Structure	Whole Area	Abbreviated Injury Scale	
(1) Whole Area	(02) Skin - Abrasion	(1) Minor Injury	
(2) Vessels	(04) Skin - Contusion	(2) Moderate Injury	
(3) Nerves	(06) Skin - Laceration	(3) Serious Injury	
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion	(4) Severe Injury	
(5) Skeletal (includes joints)	(10) Amputation	(5) Critical Injury	
(6) Head - LOC	(20) Burn	(6) Maximum (untreatable)	
(9) Skin	(30) Crush	(7) Injured, unknown severity	
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		

SOURCE OF INJURY DATA**INJURY SOURCE****DIRECT/INDIRECT INJURY****CONFIDENCE LEVEL**OFFICIAL RECORDS

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

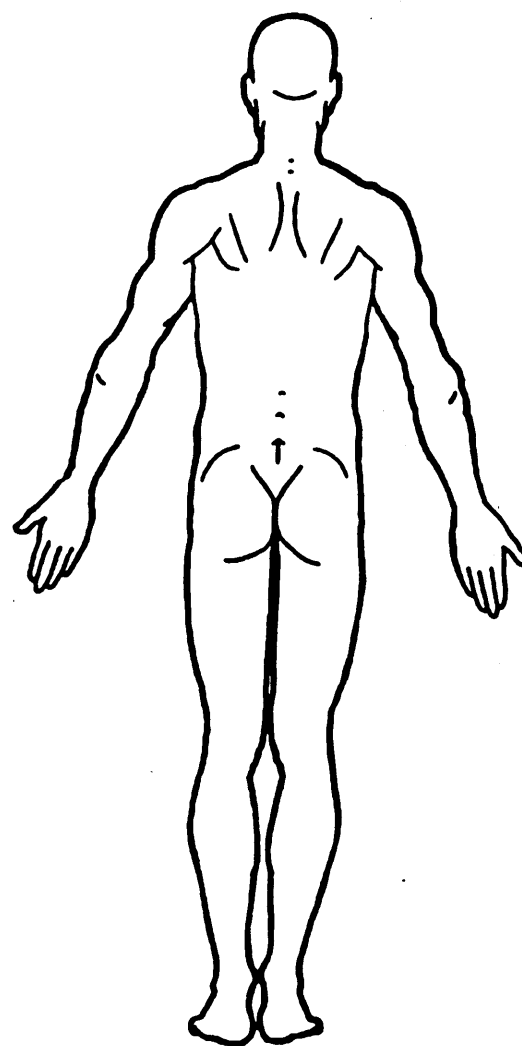
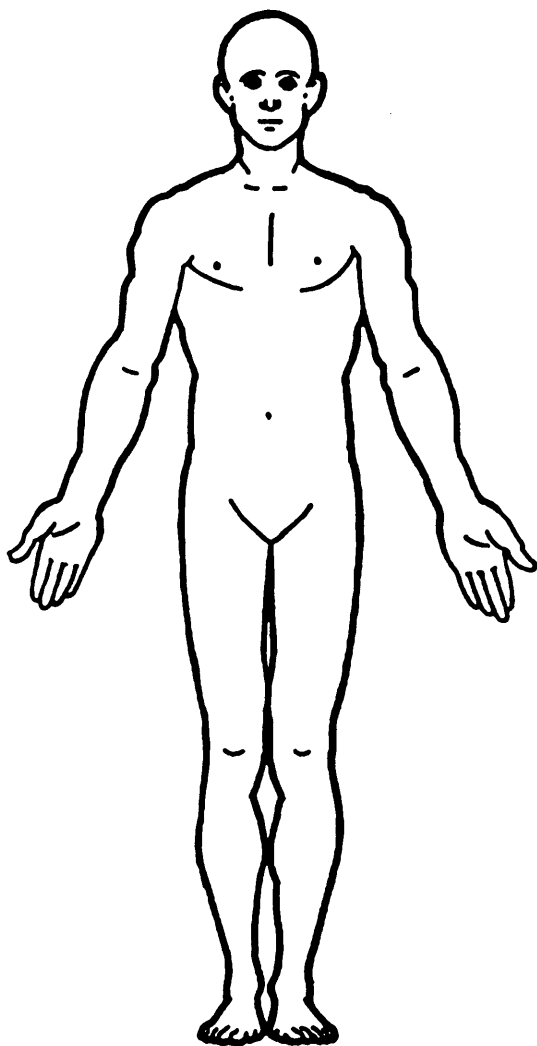
- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): _____
- (9) Police

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

☐ No

☐ Yes

Blood Alcohol
Level (mg/dl)

BAL = ____

Glasgow Coma
Scale Score

GCSS = ____

Units of Blood
Given

Units = ____

Arterial Blood
Gases

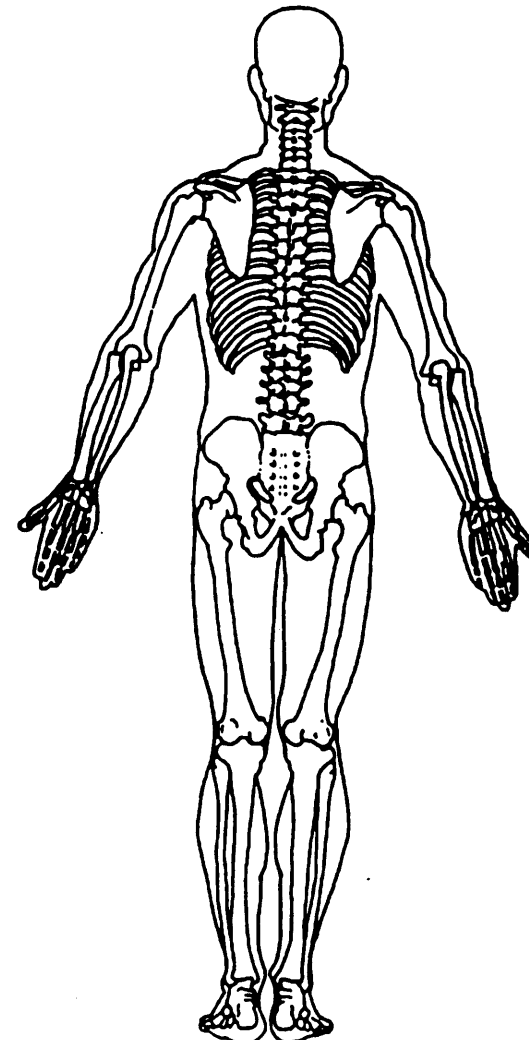
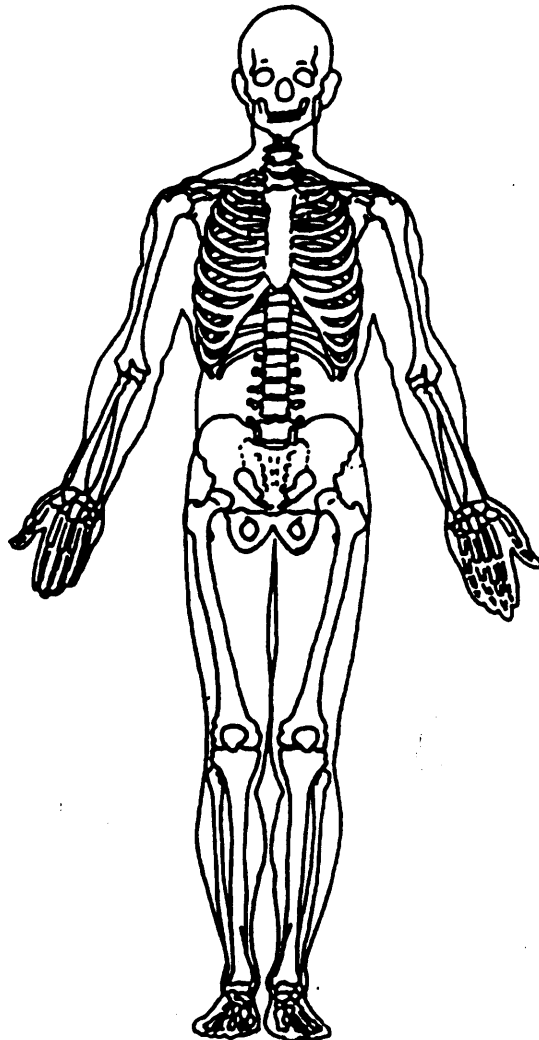
pH = ____

PO₂ = ____

PCO₂ = ____

HCO₃ = ____

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



INJURY SOURCES

FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify):
- (019) Other front object (specify):

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify):
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify):

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify):
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify):

INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify):
- (155) Head restraint system
- (160) Other occupants (specify):
- (161) Interior loose objects
- (162) Child safety seat (specify):
- (163) Other interior object (specify):

AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify)
- (195) Other air bag compartment cover (specify)

ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top
- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

FLOOR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify):

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify):
- (409) Additional or relocated switches, (specify):
- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify):

EXTERIOR OF OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify):
- (454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify):
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify):
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify):
- (514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

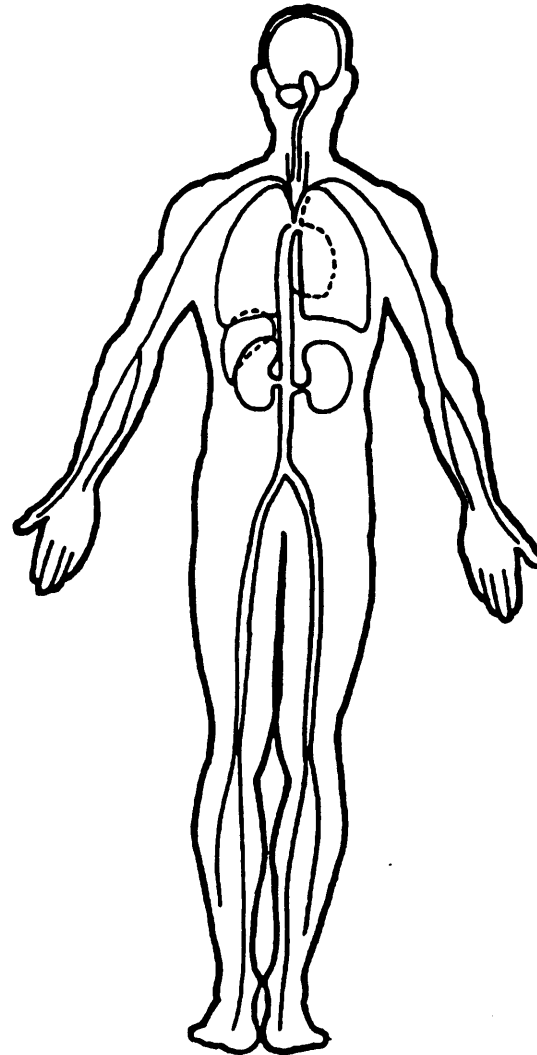
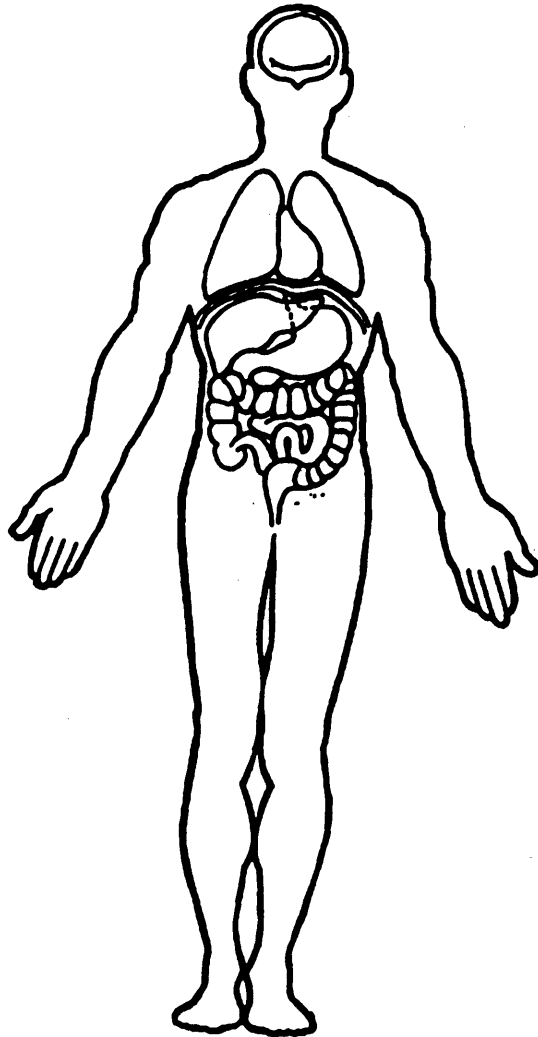
- (551) Ground
- (598) Other vehicle or object (specify):
- (599) Unknown vehicle or object

NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify):
- (604) Air bag exhaust gases
- (697) Injured, unknown source

OFFICIAL INJURY DATA —INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



CAUSE OF DEATH

ICD-9-CM

OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
FX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
PN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

Appendix N:

NASS CDS OCCUPANT ASSESSMENT FORM:

VEHICLE #2 DRIVER



OCCUPANT ASSESSMENT FORM

1. Primary Sampling Unit Number

2. Case Number - Stratum

3. Vehicle Number

4. Occupant Number

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age

Code actual age at time of accident.

(00) Less than one year old (specify by month):

(97) 97 years and older

(99) Unknown

6. Occupant's Sex

(1) Male

(2) Female-not reported pregnant

(3) Female-pregnant-1st trimester(1st-3rd month)

(4) Female-pregnant-2nd trimester(4th-6th month)

(5) Female-pregnant-3rd trimester(7th-9th month)

(6) Female-pregnant-term unknown

(9) Unknown

7. Occupant's Height

Code actual height to the nearest
centimeter.

(999) Unknown

63 inches X 2.54 = 160 centimeters

8. Occupant's Weight

Code actual weight to the nearest
kilogram.

(999)Unknown

115 pounds X .4536 = 52 kilograms

9. Occupant's Role

(1) Driver

(2) Passenger

(9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position

Front Seat

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify):

(15) On or in the lap of another occupant

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify):

(25) On or in the lap of another occupant

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify):

(35) On or in the lap of another occupant

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify):

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify):

(99) Unknown

11. Occupant's Posture

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another
occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front
of seat

(8) Other abnormal posture (specify):

(9) Unknown

EJECTION/ENTRAPMENT**12. Ejection**

- (0) No ejection
- (1) Complete ejection
- (2) Partial ejection
- (3) Ejection, unknown degree
- (9) Unknown

0**13. Ejection Area**

- (0) No ejection
- (1) Windshield
- (2) Left front
- (3) Right front
- (4) Left rear
- (5) Right rear
- (6) Rear
- (7) Roof
- (8) Other area (e.g., back of pickup, etc.)
(specify): _____
- (9) Unknown

0**14. Ejection Medium**

- (0) No ejection
- (1) Door/hatch/tailgate
- (2) Nonfixed roof structure
- (3) Fixed glazing
- (4) Nonfixed glazing (specify): _____

0

- (5) Integral structure
- (8) Other medium (specify): _____

- (9) Unknown

15. Medium Status (Immediately Prior To Impact)

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

0**16. Entrapment**

- (0) Not entrapped/exit not inhibited
- (1) Entrapped/pinned - mechanically restrained
- (2) Could not exit vehicle due to jammed doors, fire, etc.
(specify): _____
- (9) Unknown

0**17. Occupant Mobility**

- (0) Occupant fatal before removed from vehicle
- (1) Removed from vehicle while unconscious or disoriented
- (2) Removed from vehicle due to injuries
- (3) Exited vehicle with some assistance
- (4) Exited vehicle under own power
- (5) Occupant fully ejected
- (9) Unknown

4

BELT SYSTEM FUNCTION

18. Manual (Active) Belt System Availability 4

- (0) None available
- (1) Belt removed/destroyed
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt available—type unknown

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)
- (8) Other belt (specify): _____

(9) Unknown _____

19. Manual (Active) Belt System Use 04

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify): _____

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify): _____
- (99) Unknown if belt used

20. Proper Use of Manual (Active) Belts 1

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown _____

21. Manual (Active) Belt Failure Modes During Accident 1

- (0) No manual belt used or not available
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

(6) Broken retractor

(7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown _____

22. Shoulder Belt Upper Anchorage Adjustment 1

- (0) No shoulder belt
- (1) No upper anchorage adjustment for shoulder belt

Adjustable shoulder Belt Upper Anchorage

- (2) In full up position
- (3) In mid position
- (4) In full down position
- (5) Position unknown
- (9) Unknown if position has adjustable upper anchorage adjustment

23. Automatic (Passive) Belt System Availability/Function 0

- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional

- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

24. Automatic (Passive) Belt System Use 0

- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify): _____
- (3) Automatic belt use unknown
- (9) Unknown

25. Automatic (Passive) Belt System Type 0

- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

26. Proper Use of Automatic (Passive) Belt System 0

- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly

- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of automatic belt system (specify): _____

(9) Unknown _____

27. Automatic (Passive) Belt Failure Modes During Accident 0

- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

(6) Broken retractor

(7) Combination of above (specify): _____

(8) Other automatic belt failure (specify): _____

(9) Unknown _____

POLICE REPORTED RESTRAINT USE

AIR BAG SYSTEM FUNCTION

28. Police Reported Belt Use 4

- (0) None used
 (1) Police did not indicate belt use
 (2) Shoulder belt
 (3) Lap belt
 (4) Lap and shoulder belt
 (5) Belt used, type not specified
 (6) Child safety seat
 (7) Automatic belt
 (8) Other type belt, (specify):
 (9) Police indicated "unknown"

29. Police Reported Air Bag Availability/Function 0

- (0) No air bag available
 (1) Police did not indicate air bag availability/function
 (2) Deployed
 (3) Not deployed
 (4) Unknown if deployed
 (9) Police indicated "unknown"

Check the Primary Source Used In Determining Belt Use.

- [] Not equipped/not available/destroyed or rendered inoperative
 [] Vehicle inspection
 [] Official injury data
 [X] Driver/occupant interview
 [] Other (specify):
 [] Unknown if belt used

30. Frontal Air Bag System Availability/Function (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):
 (3) Air bag not reinstalled
 (9) Unknown

31. Frontal Air Bag System Deployment (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

32. Other Than First Seat Frontal Air Bag Availability/Function (This Occupant Position) 0

- (0) Not equipped/not available
 (1) Air bag

Non-functional

- (2) Air bag disconnected (specify):

- (3) Air bag not reinstalled
 (9) Unknown

Specify type of "other" air bag present:

33. Air Bag(s) Deployment, Other Than First Seat Frontal (This Occupant Position) 0

- (0) Not equipped with an "other" air bag
 (1) Deployed during accident (as a result of impact)
 (2) Deployed inadvertently just prior to accident
 (3) Deployed, details unknown
 (4) Deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
 (5) Unknown if deployed
 (7) Nondeployed
 (9) Unknown

34. Are There Indications of Air Bag System Failure? (This Occupant Position) 0

- (0) Not equipped/not available
 (1) No
 (2) Yes (specify):

- (9) Unknown

FIRST SEAT FRONTAL AIR BAG SYSTEM EVALUATION

35. Had Vehicle Been in Previous Accident(s)? 0

- (0) Not equipped/not available
(1) No previous accidents

Yes

- (2) Previous accident(s) without deployment(s)
(3) One previous accident with deployment
(4) More than one previous accident with at least one deployment
(8) Previous accidents, unknown deployment status
(9) Unknown

36. Type of Air Bag 0

- (0) Not equipped/not available
(1) Original manufacturer installed system
(2) Retrofitted air bag
(3) Replacement air bag
(8) Unknown type of air bag
(9) Unknown

37. Had Any Prior Maintenance/Service Been Performed On This Air Bag System? 0

- (0) Not equipped/not available
(1) No prior maintenance
(2) Yes, prior maintenance (specify): _____

(9) Unknown

38. Air Bag Deployment Accident Event Sequence Number 00

- (00) Not equipped/not available
_____ Code the accident event sequence number that initiated the air bag deployment

- (96) Deployed, unknown event
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

39. CDC For Air Bag Deployment Impact 0

- (0) Not equipped/not available
(1) Highest delta V
(2) Second highest delta V
(3) Other non-coded delta V (specify): _____

- (6) Deployed, unknown event
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

40. Longitudinal Component of Delta V For Air Bag Deployment Impact + 000

- (_000) Not equipped/not available
Code the value of the delta V for the impact that initiated the air bag deployment
(_996) Deployment, unknown longitudinal Delta V
(_997) Not deployed
(_998) Unknown if deployed
(_999) Unknown

41. Did Air Bag Module Cover Flap(s) Open At Designated Tear Points? 0

- (0) Not equipped/not available
(1) No
(2) Yes
(3) Deployed, unknown if flap(s) opened at designated tear points
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

42. Were Air Bag Module Cover Flap(s) Damaged? 0

- (0) Not equipped/not available
(1) No
(2) Yes (specify): _____
(3) Deployed, unknown if air bag module cover flap(s) damaged
(7) Not deployed
(8) Unknown if deployed
(9) Unknown

43. Was There Damage To The Air Bag? 00

- (00) Not equipped/not available
(01) Not damaged

Yes - Air Bag Damage

- (02) Ruptured
(03) Cut
(04) Torn
(05) Holed
(06) Burned
(07) Abraded
(88) Other damage (specify): _____

- (95) Damaged, details unknown
(96) Deployed, unknown if damaged
(97) Not deployed
(98) Unknown if deployed
(99) Unknown

**FIRST SEAT FRONTAL AIR BAG SYSTEM
EVALUATION** *continued*

44. Source of Air Bag Damage 00
 (00) Not equipped/not available
 (01) Not damaged
 (02) Object worn by occupant, (specify):
 (03) Object carried by occupant, (specify):
 (04) Adaptive/assistive controls, (specify):
 (05) Fire in vehicle
 (06) Thermal burns
 (07) Rescue or emergency efforts
 (88) Other damage source (specify):
 (95) Damaged, unknown source
 (96) Deployed, unknown if damaged
 (97) Not deployed
 (98) Unknown if deployed
 (99) Unknown
45. Was The Air Bag Tethered? 0
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify number of tether straps):
 (3) Deployed, unknown if tethered
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
46. Did The Air Bag Have Vent Ports? 0
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify number of vent ports):
 (3) Deployed, unknown if vent ports present
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
47. Was the Air Bag in this Occupant's Position Contacted by Another Occupant? 0
 (0) Not equipped/not available
 (1) No
 (2) Yes (specify):
 (3) Deployed, unknown if other occupant contact to air bag
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown
48. Was This Occupant Wearing Eye-wear? 0
 (0) Not equipped/not available
 (1) No
 (2) Eyeglasses/sunglasses
 (3) Contact lenses
 (4) Deployed, unknown if eyewear worn
 (7) Not deployed
 (8) Unknown if deployed
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION

49. Head Restraint Type/Damage by Occupant at This Occupant Position 3
 (0) No head restraints
 (1) Integral—no damage
 (2) Integral—damaged during accident
 (3) Adjustable—no damage
 (4) Adjustable—damaged during accident
 (5) Add-on—no damage
 (6) Add-on—damaged during accident
 (8) Other (specify):
 (9) Unknown
50. Seat Type (this Occupant Position) 02
 (00) Occupant not seated or no seat
 (01) Bucket
 (02) Bucket with folding back
 (03) Bench
 (04) Bench with separate back cushions
 (05) Bench with folding back(s)
 (06) Split bench with separate back cushions
 (07) Split bench with folding back(s)
 (08) Pedestal (i.e., column supported)
 (09) Box mounted seat (i.e., van type)
 (10) Other seat type (specify):
 (99) Unknown
51. Seat Orientation (this Occupant Position) 1
 (0) Occupant not seated or no seat
 (1) Forward facing seat
 (2) Rear facing seat
 (3) Side facing seat (inward)
 (4) Side facing seat (outward)
 (8) Other (specify):
 (9) Unknown
52. Seat Track Adjusted Position Prior To Impact 3
 (0) Occupant not seated or no seat
 (1) Non-adjustable seat track
- Adjustable Seat Track*
 (2) Seat at forward most track position
 (3) Seat between forward most and middle track positions
 (4) Seat at middle track position
 (5) Seat between middle and rear most track positions
 (6) Seat at rear most track position
 (9) Unknown

HEAD RESTRAINT AND SEAT EVALUATION *continued*53. Seat Back Incline Prior and Post Impact 23

- (00) Occupant not seated or no seat
 (01) Not adjustable

Upright prior to impact

- (11) Moved to completely rearward position
 (12) Moved to rearward midrange position
 (13) Moved to slightly rearward position
 (14) Retained pre-impact position
 (15) Moved to slightly forward position
 (16) Moved to forward midrange position
 (17) Moved to completely forward position

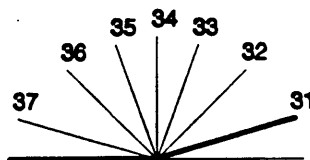
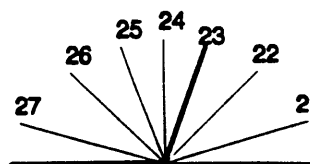
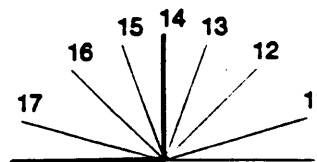
Slightly reclined prior to impact

- (21) Moved to completely rearward position
 (22) Moved to rearward midrange position
 (23) Retained pre-impact position
 (24) Moved to upright position
 (25) Moved to slightly forward position
 (26) Moved to forward midrange position
 (27) Moved to completely forward position

Completely reclined prior to impact

- (31) Retained pre-impact position
 (32) Moved to rearward midrange position
 (33) Moved to slightly rearward position
 (34) Moved to upright position
 (35) Moved to slightly forward position
 (36) Moved to forward midrange position
 (37) Moved to completely forward position

(99) Unknown

54. Seat Performance (this Occupant Position) 1

- (0) Occupant not seated or no seat
 (1) No seat performance failure(s)
 (2) Seat adjusters failed
 (3) Seat back folding locks or "seat back" failed (specify): _____
 (4) Seat track/anchors failed
 (5) Deformed by impact of occupant
 (6) Deformed by passenger compartment intrusion, (specify): _____
 (7) Combination of above (specify): _____
 (8) Other (specify): _____
 (9) Unknown

CHILD SAFETY SEAT

55. Child Safety Seat Make/Model 000
(000) No child safety seat
Applicable codes are found in your NASS CDS
Data Collection, Coding and Editing
(950) Built-in child safety seat
(997) Other make/model (specify):

(998) Unknown make/model
(999) Unknown if child safety seat used

56. Type of Child Safety Seat 0
(0) No child safety seat
(1) Infant seat
(2) Toddler seat
(3) Convertible seat
(4) Booster seat - with shield
(5) Booster seat - without shield
(7) Other type child safety seat (specify):

(8) Unknown child safety seat type
(9) Unknown if child safety seat used

57. Child Safety Seat Orientation 00
(00) No child safety seat

Designed for Rear Facing for This Age/Weight

(01) Rear facing
(02) Forward facing
(08) Other orientation (specify):

(09) Unknown orientation

Designed For Forward Facing for This Age/Weight

(11) Rear facing
(12) Forward facing
(18) Other orientation (specify):

(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

(21) Rear facing
(22) Forward facing
(28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

58. Child Safety Seat Harness Usage 00

59. Child Safety Seat Shield Usage 00

60. Child Safety Seat Tether Usage 00

Note: Options below applicable to
Variables OA58-OA60.

(00) No child safety seat

Not Designed With Harness/Shield/Tether

(01) After market harness/shield/tether
added, not used
(02) After market harness/shield/tether used
(03) Child safety seat used, but no after market
harness/shield/tether added
(09) Unknown if harness/shield/tether
added or used

Designed With Harness/Shield/Tether

(11) Harness/shield/tether not used
(12) Harness/shield/tether used
(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used
(22) Harness/shield/tether used
(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES**61. Injury Severity (Police Rating)** 0

- (0) O - No injury
- (1) C - Possible injury
- (2) B - Nonincapacitating injury
- (3) A - Incapacitating injury
- (4) K - Killed
- (5) U - Injury, severity unknown
- (6) Died prior to accident
- (9) Unknown

62. Treatment - Mortality 0

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease (specify):

Nonfatal

- (3) Hospitalization
- (4) Transported and released
- (5) Treatment at scene - nontransported
- (6) Treatment later
- (7) Treatment - other (specify):

- (8) Transported to a medical facility-unknown if treated
- (9) Unknown

63. Type Of Medical Facility (for Initial Treatment) 0

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

- (9) Unknown

64. Hospital Stay 00

- (00) Not Hospitalized
- _____ Code the number of days (up through 60) that the occupant stayed in hospital.
- (61) 61 days or more
- (99) Unknown

65. Working Days Lost 00

- _____ Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
- (61) 61 days or more
- (62) Fatally injured
- (97) Not working prior to accident
- (99) Unknown

STOP WORK HERE**VARIABLES 66-74****TO BE CODED BY THE ZONE CENTER**

TO BE CODED BY THE ZONE CENTER**INJURY CONSEQUENCES****66. Time to Death** 00

Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 + n up through 30 days = 60)

- (00) Not fatal
(96) Fatal - ruled disease
(99) Unknown

67. 1st Medically Reported Cause of Death 00**68. 2nd Medically Reported Cause of Death** 00**69. 3rd Medically Reported Cause of Death** 00

Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death

- (00) Not fatal or no additional causes
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

(97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

70. Number of Recorded Injuries for This Occupant 01

Code the actual number of injuries recorded for this occupant.

- (00) No recorded injuries
(97) Injured, details unknown
(99) Unknown if injured

TRAUMA DATA**71. Glasgow Coma Scale (GCS) Score** 01
(at Medical Facility)

- (00) Not injured
(01) Injured - not treated at medical facility
(02) No GCS Score at medical facility
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.
(97) Injured, details unknown
(99) Unknown if injured

72. Was the Occupant Given Blood? 1

- (1) No - blood not given
(2) Yes - blood given
(specify units):
(9) Unknown if blood given

73. Arterial Blood Gases (ABG) - HCO₃ 01

- (00) Not injured
(01) Injured, ABGs not measured or reported
(02-50) Code the actual value of the HCO₃
(96) ABGs reported, HCO₃ unknown
(97) Injured, details unknown
(99) Unknown if injured

BELT USE DETERMINATION**74. Primary Source of Belt Use Determination** 3

- (0) Not equipped/not available/destroyed or rendered inoperative
(1) Vehicle inspection
(2) Official injury data
(3) Driver/occupant interview
(8) Other (specify):
(9) Unknown if belt used

Appendix O:

NASS CDS OCCUPANT INJURY FORM:

VEHICLE #2 DRIVER



U.S. Department of Transportation
National Highway Traffic Safety
Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number

10

3. Vehicle Number

02

2. Case Number - Stratum

9517

4. Occupant Number

01

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
Abrasion ① Thigh	5. <u>7</u>	6. <u>8</u>	7. <u>9</u>	8. <u>02</u>	9. <u>02</u>	10. <u>1</u>	11. <u>2</u>	12. <u>004</u>	13. <u>2</u>	14. <u>1</u>	15. <u>00</u>
2nd	16. ____	17. ____	18. ____	19. ____	20. ____	21. ____	22. ____	23. ____	24. ____	25. ____	26. ____
3rd	27. ____	28. ____	29. ____	30. ____	31. ____	32. ____	33. ____	34. ____	35. ____	36. ____	37. ____
4th	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____	45. ____	46. ____	47. ____	48. ____
5th	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____	55. ____	56. ____	57. ____	58. ____	59. ____
6th	60. ____	61. ____	62. ____	63. ____	64. ____	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____

[illegible]

25th

OCCUPANT INJURY CLASSIFICATION

Body Region	Specific Anatomic Structure	Level of Injury	Aspect
(1) Head		Specific injuries are assigned consecutive two-digit numbers beginning with 02.	(1) Right
(2) Face			(2) Left
(3) Neck	<u>Vessels, Nerves, Organs.</u>	To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.	(3) Bilateral
(4) Thorax	<u>Bones, Joints</u> are assigned consecutive two digit numbers beginning with 02.		(4) Central
(5) Abdomen			(5) Anterior
(6) Spine			(6) Posterior
(7) Upper Extremity			(7) Superior
(8) Lower Extremity			(8) Inferior
(9) Unspecified	The exceptions to this rule apply to:		(9) Unknown
			(0) Whole region
Type of Anatomic Structure	<u>Whole Area</u>	Abbreviated Injury Scale	
(1) Whole Area	(02) Skin - Abrasion	(1) Minor Injury	
(2) Vessels	(04) Skin - Contusion	(2) Moderate Injury	
(3) Nerves	(06) Skin - Laceration	(3) Serious Injury	
(4) Organs (includes Muscles/ligaments)	(08) Skin - Avulsion	(4) Severe Injury	
(5) Skeletal (includes joints)	(10) Amputation	(5) Critical Injury	
(6) Head - LOC	(20) Burn	(6) Maximum (untreatable)	
(9) Skin	(30) Crush	(7) Injured, unknown severity	
	(40) Degloving		
	(50) Injury - NFS		
	(90) Trauma, other than mechanical		
	<u>Head - LOC</u>		
	(02) Length of LOC		
	(04) Level		
	(06) of		
	(08) Consciousness		
	(10) Concussion		
	<u>Spine</u>		
	(02) Cervical		
	(04) Thoracic		
	(06) Lumbar		

SOURCE OF INJURY DATA**INJURY SOURCE****DIRECT/INDIRECT INJURY****CONFIDENCE LEVEL**OFFICIAL RECORDS

- (1) Autopsy records with or without hospital/medical records
- (2) Hospital/medical records other than emergency room (e.g., discharge summary)
- (3) Emergency room records only (including associated X-rays or other lab reports)
- (4) Private physician, walk-in or emergency clinic

UNOFFICIAL RECORDS

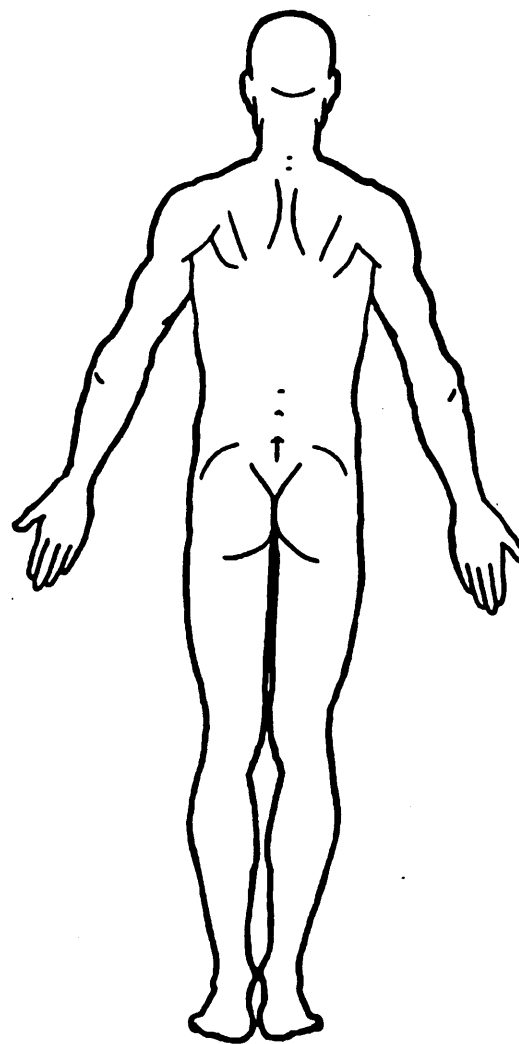
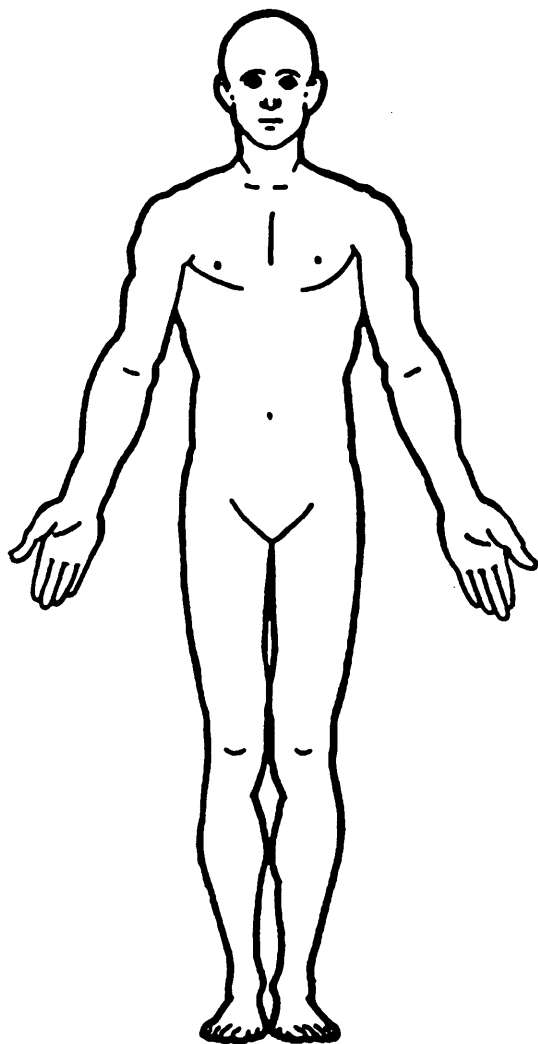
- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): _____
- (9) Police

- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

- (1) Direct contact injury
- (2) Indirect contact injury
- (3) Noncontact injury
- (7) Injured, unknown source

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

___ No

___ Yes

Blood Alcohol
Level (mg/dl)

BAL = ___

Glasgow Coma
Scale Score

GCSS = ___

Units of Blood
Given

Units = ___

Arterial Blood
Gases

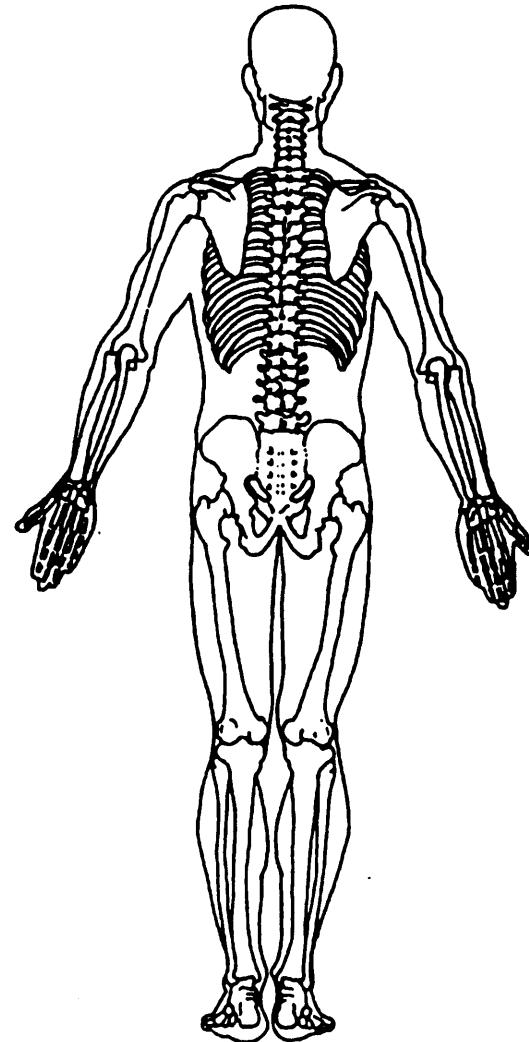
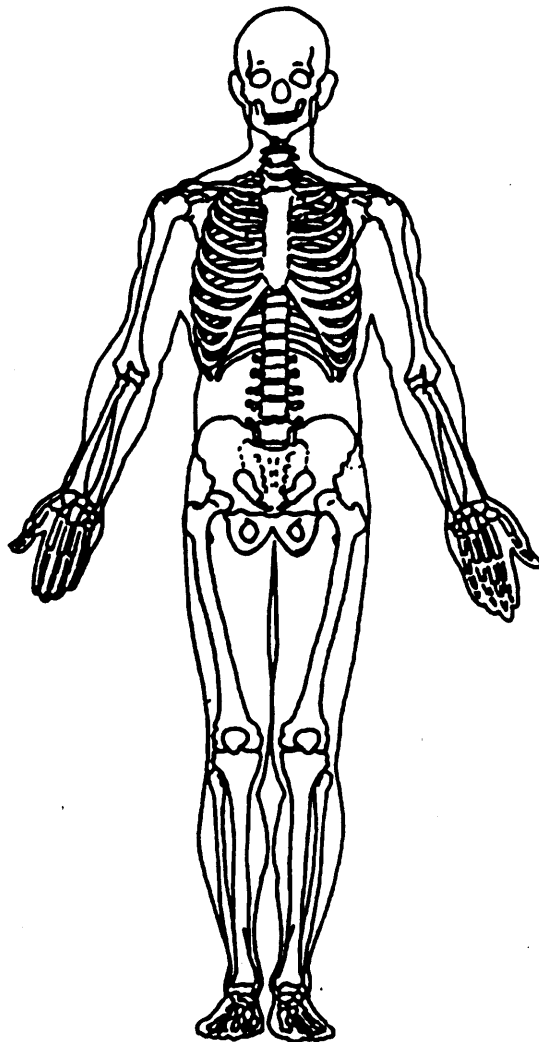
pH = ___

PO₂ = ___

PCO₂ = ___

HCO₃ = ___

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



INJURY SOURCES

FRONT

- (001) Windshield
- (002) Mirror
- (003) Sunvisor
- (004) Steering wheel rim
- (005) Steering wheel hub/spoke
- (006) Steering wheel (combination of codes 004 and 005)
- (007) Steering column, transmission selector lever, other attachment
- (008) Cellular telephone or CB radio
- (009) Add on equipment (e.g., tape deck, air conditioner)
- (010) Left instrument panel and below
- (011) Center instrument panel and below
- (012) Right instrument panel and below
- (013) Glove compartment door
- (014) Knee bolster
- (015) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (016) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (017) Windshield reinforced by exterior object (specify): _____
- (019) Other front object (specify): _____

LEFT SIDE

- (051) Left side interior surface, excluding hardware or armrests
- (052) Left side hardware or armrest
- (053) Left A (A1/A2)-pillar
- (054) Left B-pillar
- (055) Other left pillar (specify): _____
- (056) Left side window glass
- (057) Left side window frame
- (058) Left side window sill
- (059) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (060) Other left side object (specify): _____

RIGHT SIDE

- (101) Right side interior surface, excluding hardware or armrests

- (102) Right side hardware or armrest
- (103) Right A (A1/A2)-pillar
- (104) Right B-pillar
- (105) Other right pillar (specify): _____
- (106) Right side window glass
- (107) Right side window frame
- (108) Right side window sill
- (109) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (110) Other right side object (specify): _____

INTERIOR

- (151) Seat, back support
- (152) Belt restraint webbing/buckle
- (153) Belt restraint B-pillar or door frame attachment point
- (154) Other restraint system component (specify): _____
- (155) Head restraint system
- (160) Other occupants (specify): _____
- (161) Interior loose objects
- (162) Child safety seat (specify): _____
- (163) Other interior object (specify): _____

AIR BAG

- (170) Air bag-driver side
- (171) Air bag-driver side and eyewear
- (172) Air bag-driver side and jewelry
- (173) Air bag-driver side and object held
- (174) Air bag-driver side and object in mouth
- (175) Air bag compartment cover-driver side
- (176) Air bag compartment cover-driver side and eyewear
- (177) Air bag compartment cover-driver side and jewelry
- (178) Air bag compartment cover-driver side and object held
- (179) Air bag compartment cover-driver side and object in mouth
- (180) Air bag-passenger side
- (181) Air bag-passenger side and eyewear
- (182) Air bag-passenger side and jewelry

- (183) Air bag-passenger side and object held
- (184) Air bag-passenger side and object in mouth
- (185) Air bag compartment cover-passenger side
- (186) Air bag compartment cover-passenger side and eyewear
- (187) Air bag compartment cover-passenger side and jewelry
- (188) Air bag compartment cover-passenger side and object held
- (189) Air bag compartment cover-passenger side and object in mouth
- (190) Other air bag (specify): _____
- (195) Other air bag compartment cover (specify): _____

ROOF

- (201) Front header
- (202) Rear header
- (203) Roof left side rail
- (204) Roof right side rail
- (205) Roof or convertible top
- (251) Floor (including toe pan)
- (252) Floor or console mounted transmission lever, including console
- (253) Parking brake handle
- (254) Foot controls including parking brake

REAR

- (301) Backlight (rear window)
- (302) Backlight storage rack, door, etc.
- (303) Other rear object (specify): _____

ADAPTIVE (ASSISTIVE) DRIVING EQUIPMENT

- (401) Hand controls for braking/acceleration
- (402) Steering control devices (attached to OEM steering wheel)
- (403) Steering knob attached to steering wheel
- (405) Replacement steering wheel (i.e., reduced diameter)
- (406) Joy stick steering controls
- (407) Wheelchair tie-downs
- (408) Modification to seat belts, (specify): _____
- (409) Additional or relocated switches, (specify): _____
- (410) Raised roof

- (411) Wall mounted head rest (used behind wheel chair)
- (412) Other adaptive device (specify): _____

EXTERIOR of OCCUPANT'S VEHICLE

- (451) Hood
- (452) Outside hardware (e.g., outside mirror, antenna)
- (453) Other exterior surface or tires (specify): _____
- (454) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (501) Front bumper
- (502) Hood edge
- (503) Other front of vehicle (specify): _____
- (504) Hood
- (505) Hood ornament
- (506) Windshield, roof rail, A-pillar
- (507) Side surface
- (508) Side mirrors
- (509) Other side protrusions (specify): _____
- (510) Rear surface
- (511) Undercarriage
- (512) Tires and wheels
- (513) Other exterior of other motor vehicle (specify): _____
- (514) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

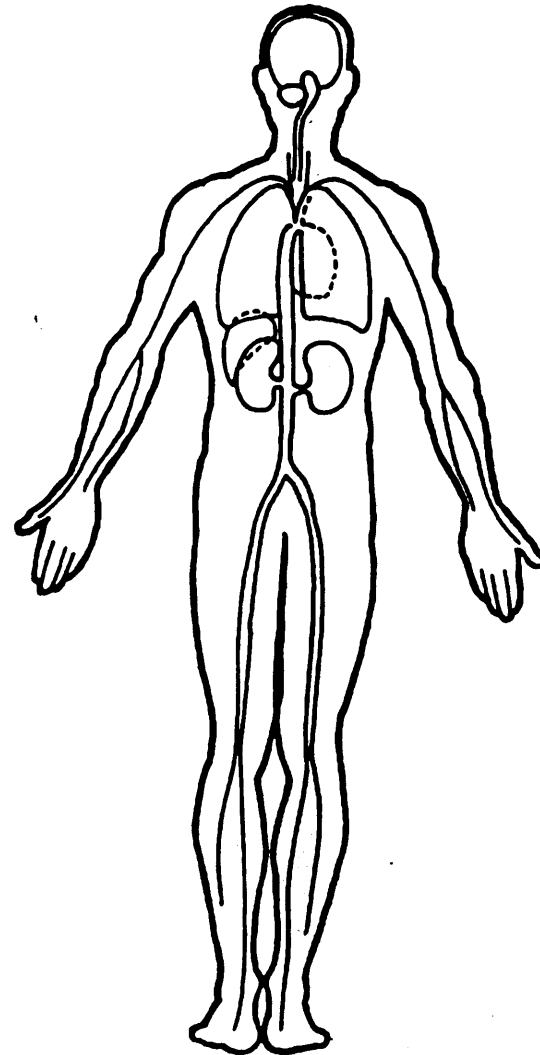
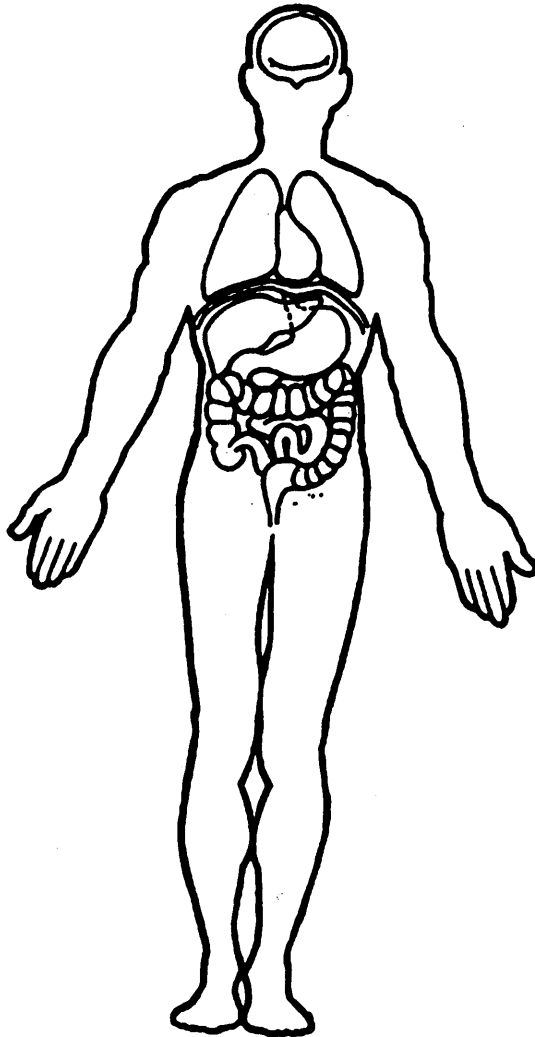
- (551) Ground
- (598) Other vehicle or object (specify): _____
- (599) Unknown vehicle or object

NONCONTACT INJURY

- (601) Fire in vehicle
- (602) Flying glass
- (603) Other noncontact injury source (specify): _____
- (604) Air bag exhaust gases
- (697) Injured, unknown source

OFFICIAL INJURY DATA —INTERNAL INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)



CAUSE OF DEATH

ICD-9-CM

OTHER DRUGS (GV16)

Specimen Test Type	Drug(s)	Drug Type
<input type="checkbox"/> Blood and urine tests <input type="checkbox"/> Blood test only <input type="checkbox"/> Urine test only <input type="checkbox"/> Other test <input type="checkbox"/> Unspecified		

MEDICAL RECORD ABBREVIATIONS

Symbol	Record Type Description
A	Autopsy—medical information based upon an invasive examination of a body
ME	Medical examiner's record—where the information reported on the patient is based on a non-invasive examination of the body
AR	Admission record/summary—any medical information on this record should be considered as post-ER since it summarizes the patient's admission; these records are common in short hospitalizations and usually only contain: admission DX(s), final DX(s), and a listing of surgical treatments; ICD-9-CM codes are frequently available.
FS	Admission/discharge face sheet—face sheets are essentially the same as admission record/summaries and contain the same types of information as discussed above
DS	Discharge summary—shorten history of a patient's hospitalization highlighting the patient's major injuries; this record is often written from the perspective of its author which in many cases is a consultant
OS	Operative record—summary of a performed surgical operation often providing detailed information about a specific trauma; patients who survive the surgery are normally admitted; thus, this record is normally considered post-ER; however, if this record results from an outpatient surgery, then treat it as emergency-room related
FX	Radiographic records—taken after the patient has been admitted, or while in surgery or intensive care
FN	Patient progress notes—supplemental record containing additional nurses notes taken after the patient's admission
HP	History and physical exam—medical history and the results of the physical exam obtained by the emergency room physician assigned to the patient upon arrival at the emergency room
CN	Consultation record—consultations are in essence additional history and physical exams performed by doctors whose expertise was requested by the emergency room physician; the consultation may occur during the emergency room visit or after admission
ER	Emergency room report—where the author of this information is undefined
EN	Emergency room nurse—"nurse/complaint of" section on the emergency room report
ED	Emergency room doctor—"objective/physical exam" section plus "diagnosis and treatment" sections (i.e., doctor portion of emergency room report)
NN	Nurse notes—supplemental record containing additional notes taken by the emergency room nurse(s)
EX	Radiographic records—taken during the patients stay in the emergency room
CV	Coroner's verdict—statement of cause of death for legal specific regarding injuries; care must be exercised to ascertain the credentials of the verdict's author.
CR	Coroner's report—medical information based upon a noninvasive examination performed by a person who is not a doctor but who has the title of a coroner
ET	Emergency medical technician—report by a person who qualifies as an emergency medical services technician (EMS or EMT)
O	Other source—medical information based on an other source (e.g., newspaper, DVM—Doctor of Veterinary Medicine)

TRANSPORTATION RESEARCH CENTER

Indiana University
Bloomington, Indiana 47403-1599

ON-SITE AIR BAG INVESTIGATION

SELECTED PHOTOGRAPHS

CASE NO. - 95-17
FLEET - LEASED VEHICLE
LOCATION [REDACTED], TEXAS
ACCIDENT DATE [REDACTED] 1995

A total of eighty color copies of photographs are presented and referenced as Photograph #01 through Photograph #80. Photographs numbered #29, #34, #52, #53, and #54 were taken and made available by the Case Vehicle Owner's Engineering Firm. The remainder of these photographs were taken by the Transportation Research Center; NOTE: the case vehicle's driver and right front passenger air bags had been removed prior to this contractor's inspection of the vehicle.

[REDACTED] 1995

Contract Number: DTNH22-94-D-17058

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590



01 -- Case Vehicle's westward travel path in inside through lane approximately 50 meters (165 feet) east of impact



02 -- Case Vehicle's westward travel path in inside through lane approximately 30 meters (99 feet) east of impact



03 -- Case Vehicle's westward travel path in inside through lane approximately 15 meters (50 feet) east of impact



04 -- Case Vehicle's westward travel path in inside through lane approximately 3 meters (10 feet) east of impact



05 -- Eastward view of Case Vehicle's westward travel path in inside through lane from area of impact in intersection



06 -- Vehicle #2's southward travel path in southbound lane approximately 50 meters (165 feet) north of impact



07 -- Vehicle #2's southward travel path in southbound lane approximately 20 meters (66 feet) north of impact



08 -- Vehicle #2's southward travel path in southbound lane approximately 3 meters (10 feet) north of impact



09 -- Vehicle #2's southward travel path in southbound lane just prior to impact



10 -- Vehicle #2's southwestward post-impact path of travel; NOTE: final rest position was near center median facing east-southeast



11 -- Vehicle #2's final rest position near center of median heading east-southeast;
NOTE: vehicle rotated counterclockwise from impact to rest



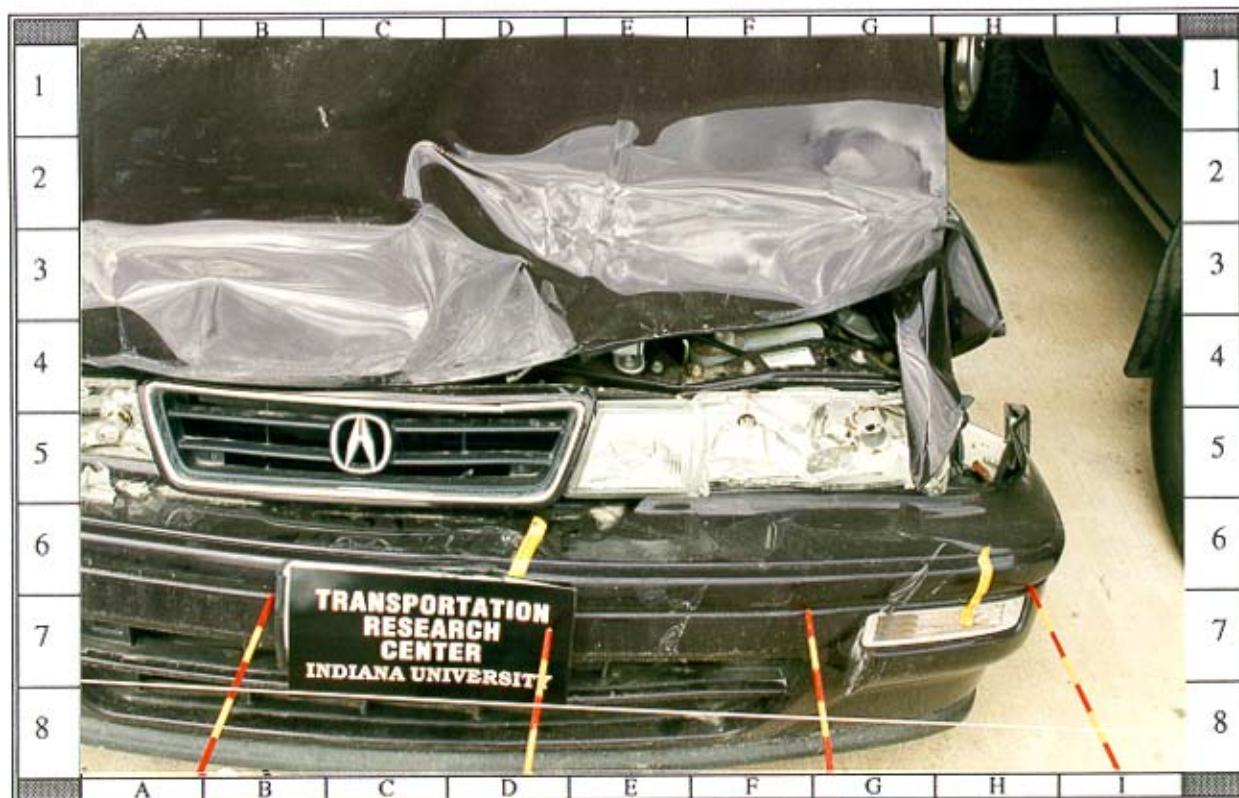
12 -- Northeast view from vehicle #2's final rest position of southward travel path and glass debris near median most likely from driver's window



13 -- Case Vehicle's damaged front without contour gauge; NOTE: direct damage is essentially across entire front



14 -- Case Vehicle's damaged front with contour gauge present; NOTE: slight shift of front end to left (toward right edge of photo)



15 -- Close-up of direct damage to Case Vehicle's front left bumper; NOTE: Vehicle #2's left front wheel rim mark (cell G6--G7)



16 -- Overhead view of frontal crush to Case Vehicle with contour gauge present; NOTE: maximum crush occurs @ C₁ (see cell H5)



17 -- Case Vehicle's damaged front end viewed from approximately 45 degrees left of front with contour gauge present



18 -- Reference line view of Case Vehicle's left side from front showing front left corner damage and slight leftward end shift



19 -- Reference line view of Case Vehicle's front damage from left with contour gauge present showing crush measurements



20 -- Case Vehicle's undamaged left side and left rear viewed from approximately 45 degrees left of back



21 -- Case Vehicle's undamaged back viewed from approximately 45 degrees left of back



22 -- Reference line view of Case Vehicle's undamaged back from right also showing undamaged right rear



23 -- Case Vehicle's holed right windshield; NOTE: windshield holed from right front passenger's head contact



24 -- Close-up view of Case Vehicle's holed right windshield; NOTE: windshield holed from right front passenger's head contact



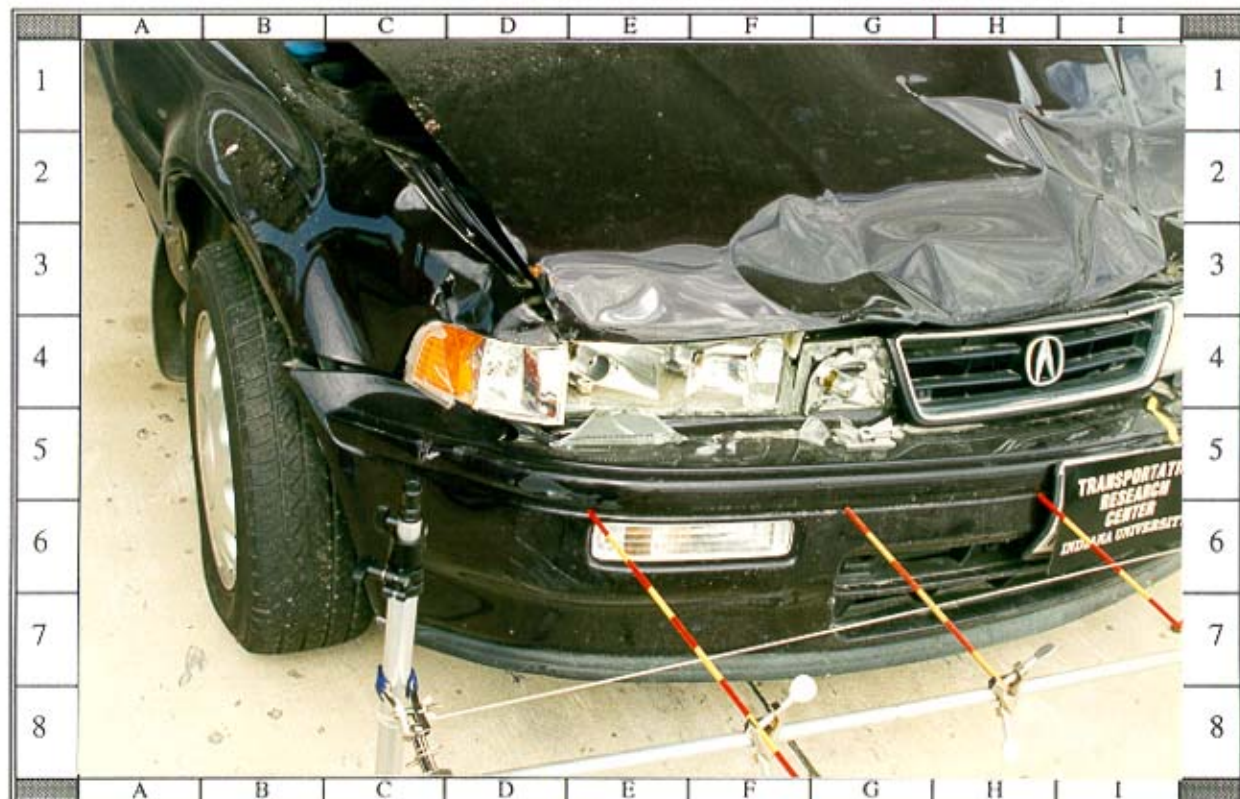
25 -- Reference line view of Case Vehicle's front damage from right with contour gauge present showing right front corner damage



26 -- Reference line view of Case Vehicle's right side from front showing front right corner damage and slight leftward end shift



27 -- Case Vehicle's damaged front viewed from approximately 45 degrees right of front; NOTE: induced damage to right fender and holed windshield



28 -- Close-up of direct damage to Case Vehicle's front right bumper with contour gauge present



29 -- Case Vehicle's front seating areas viewed from left showing deployed driver and right front passenger air bags



30 -- Interior surface of Case Vehicle's driver door and dash contacted by driver's left knee; NOTE: air bag removed from steering column hub



31 -- Close-up of Case Vehicle's left dash, instrument panel, and steering wheel hub; NOTE: removed driver's air bag



32 -- Case Vehicle's driver seating area, center dash and console, header, and rear-view mirror viewed from center rear seat; NOTE: removed air bag



33 -- Case Vehicle's undeformed steering wheel rim viewed from right; NOTE: no evidence of contact to driver's door surface or left A-pillar



34 -- Case Vehicle's front seating areas viewed from left showing deployed driver and right front passenger air bags



35 -- Case Vehicle's front dash and seating area; NOTE: right dash contacts, adjustable shoulder restraint, and removed right front air bag module



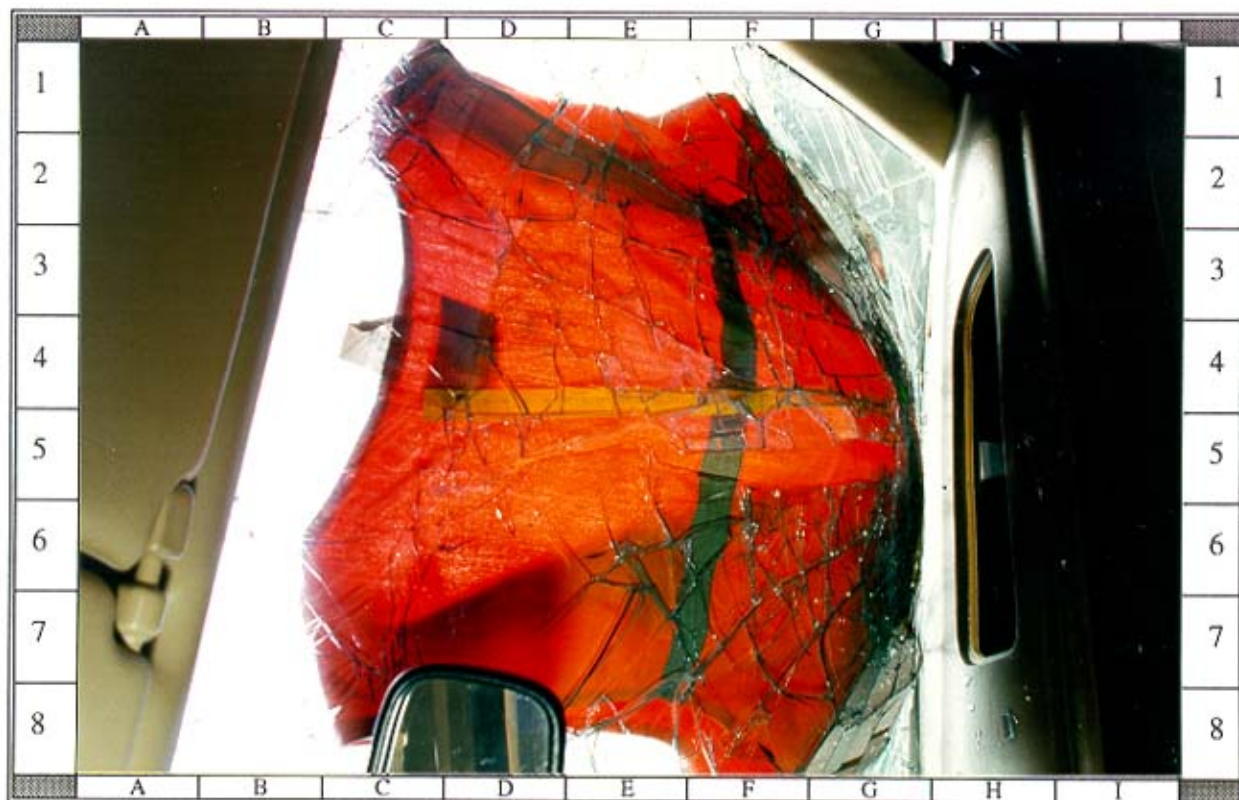
36 -- Case Vehicle's contacted right front knee bolster and glovebox; NOTE: yellow tape indicates contact areas



37 -- Close-up of contact scuffs to Case Vehicle's removed glovebox door



38 -- Case Vehicle's holed windshield on right, noncontacted right A-pillar, contacted knee bolster and glovebox, and removed right front air bag module



39 -- Close-up of Case Vehicle's holed right windshield; windshield holed by right front passenger's head



40 -- Case Vehicle's rear seating area showing obvious contacts to right front seat-back; NOTE: driver claims rear passenger was seated in position "21"



41 -- Case Vehicle's rear seating area from right; NOTE: outboard three-point belts and adjustable head restraints



42 -- Case Vehicle's rear seating area from left showing seatback knee contacts; NOTE: lack of space behind driver's seat--position "21" (see PHOTO #40)



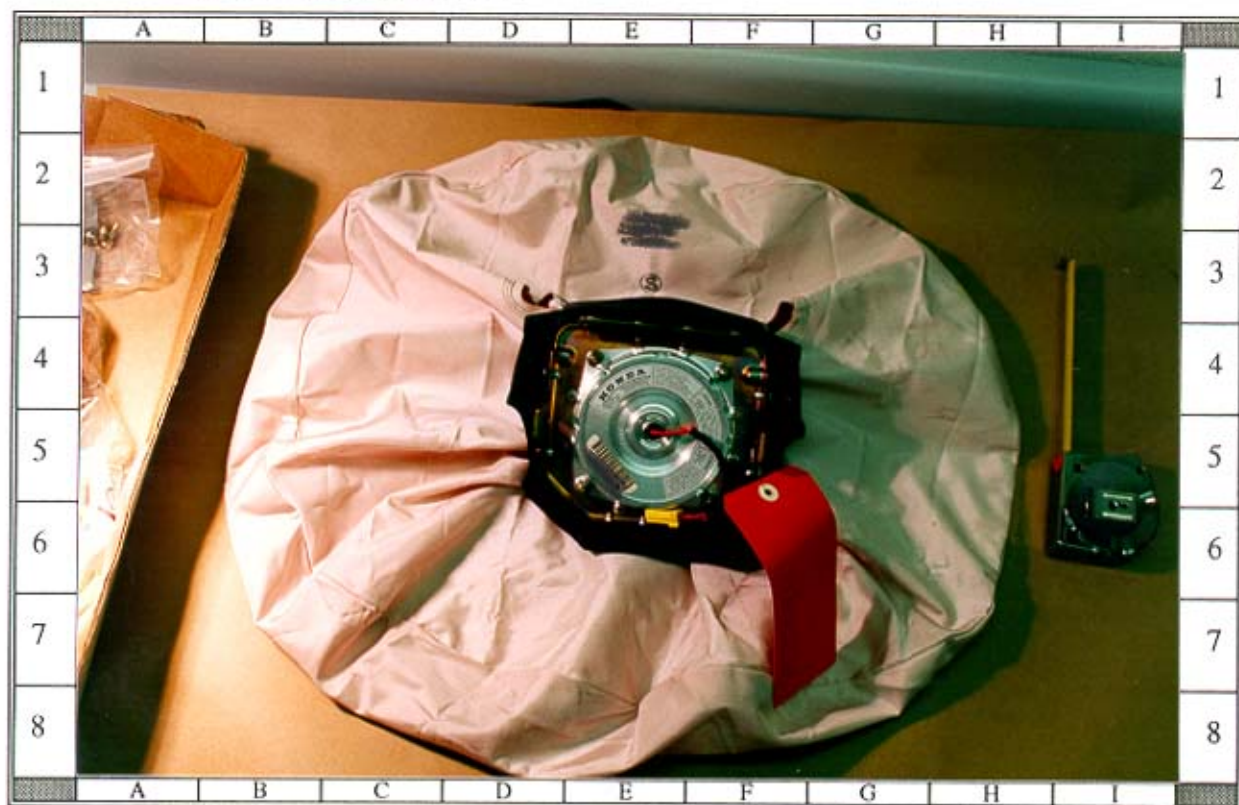
43 -- Case Vehicle's removed driver air bag with lipstick transfer ("P") from driver



44 -- Case Vehicle's removed driver air bag and top cover flap; NOTE: no evidence of contact found



45 -- Case Vehicle's removed driver air bag and bottom cover flap; NOTE: no evidence of contact found



46 -- Case Vehicle's removed driver air bag and inflator module viewed from behind



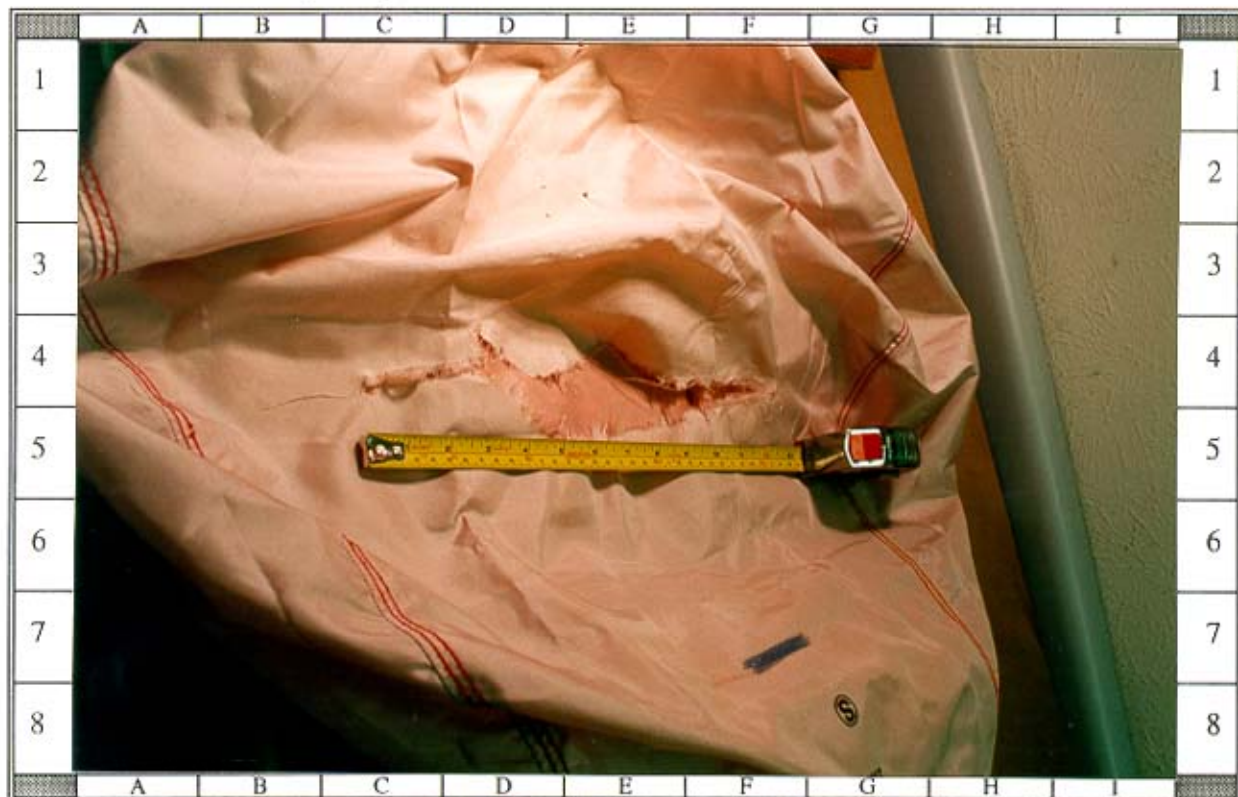
47 -- Case Vehicle's removed right front air bag showing four cuts in bag material ("M", "H", "N", and "E") most likely from windshield glass



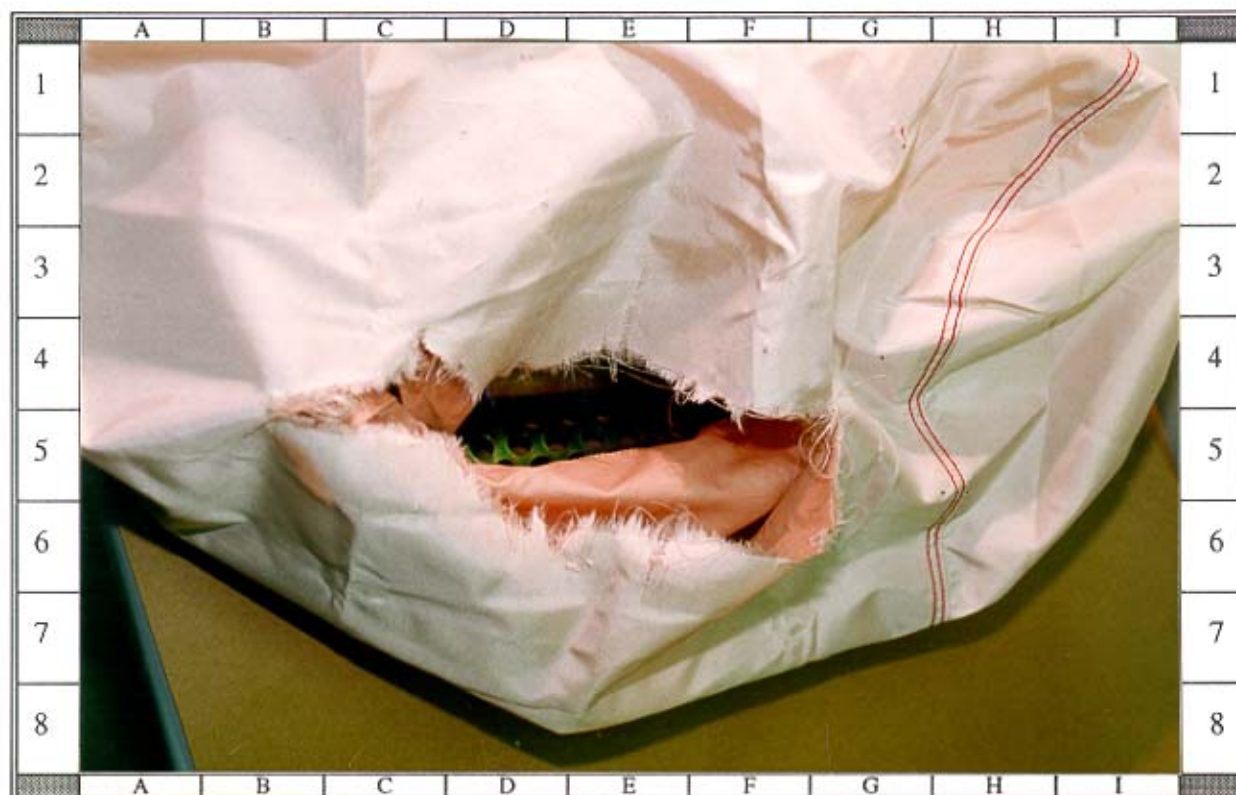
48 -- Closer-up of Case Vehicle's removed right front air bag showing cuts in material ("E" and "H"); NOTE: tear in bag at bottom of photograph



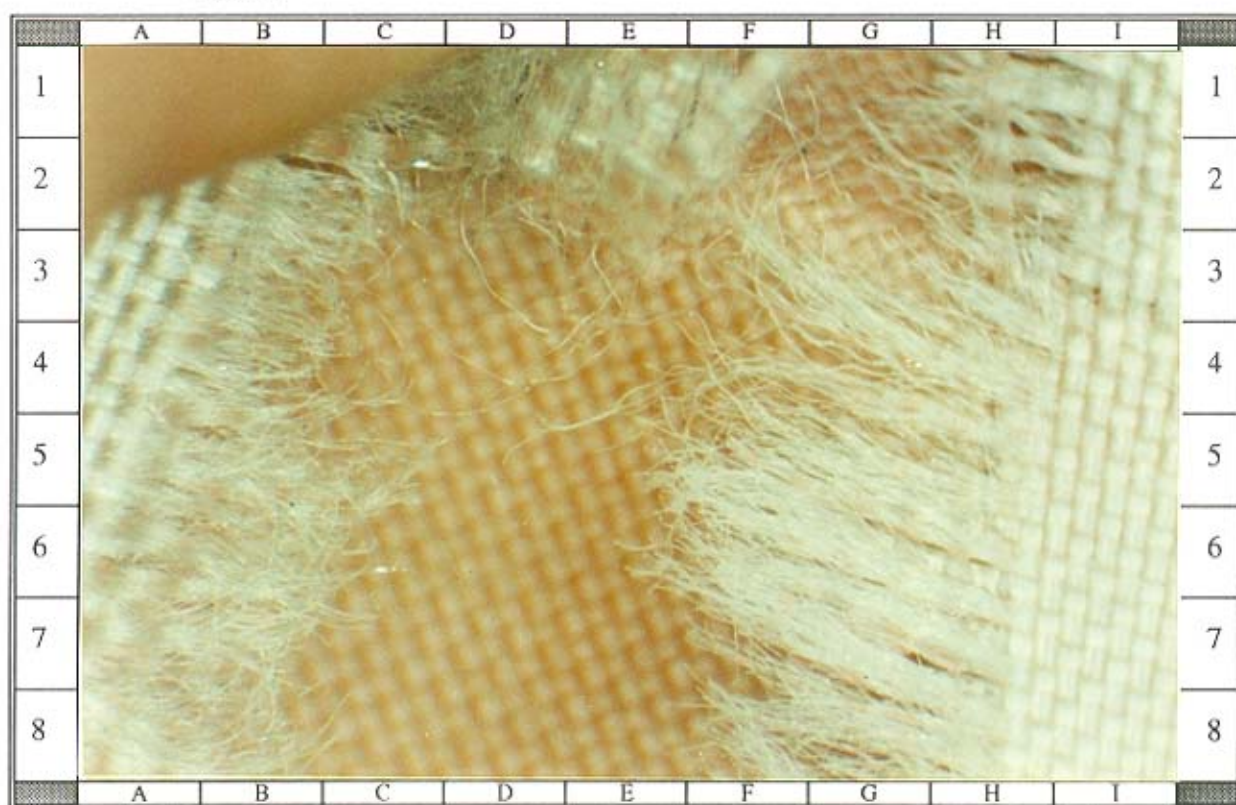
49 -- Case Vehicle's torn right front air bag; NOTE: tear located in bottom portion of air bag along fold lines



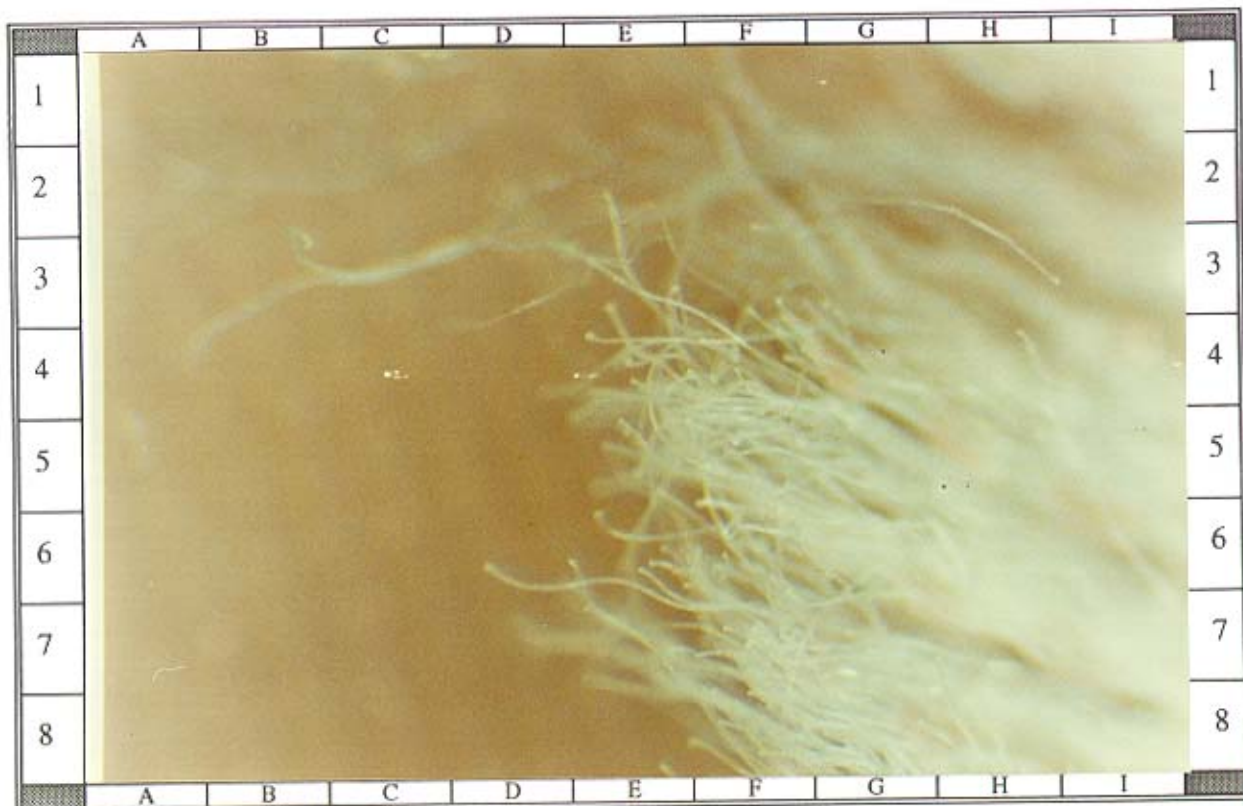
50 -- Case Vehicle's torn right front air bag showing length to be approximately 34 centimeters (13.4 inches)



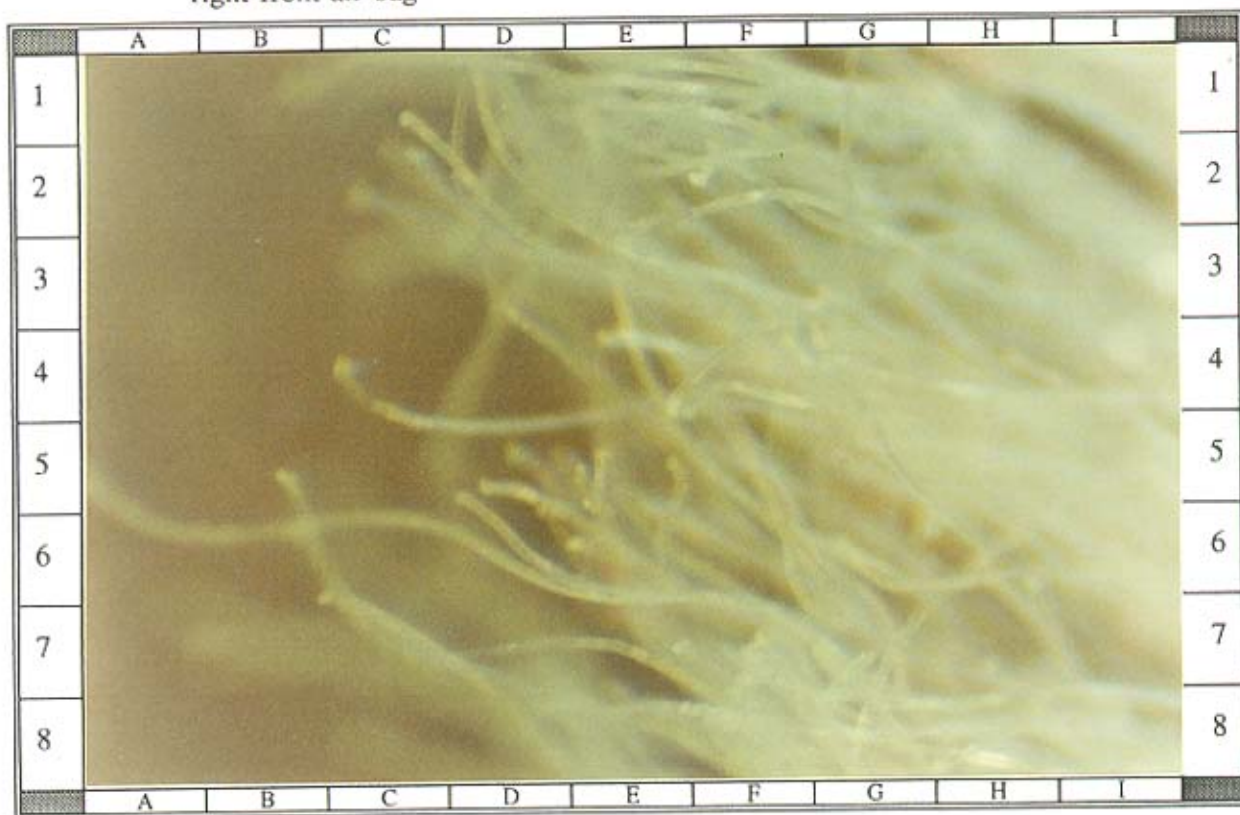
51 -- Case Vehicle's torn right front air bag showing close proximity to inflator module



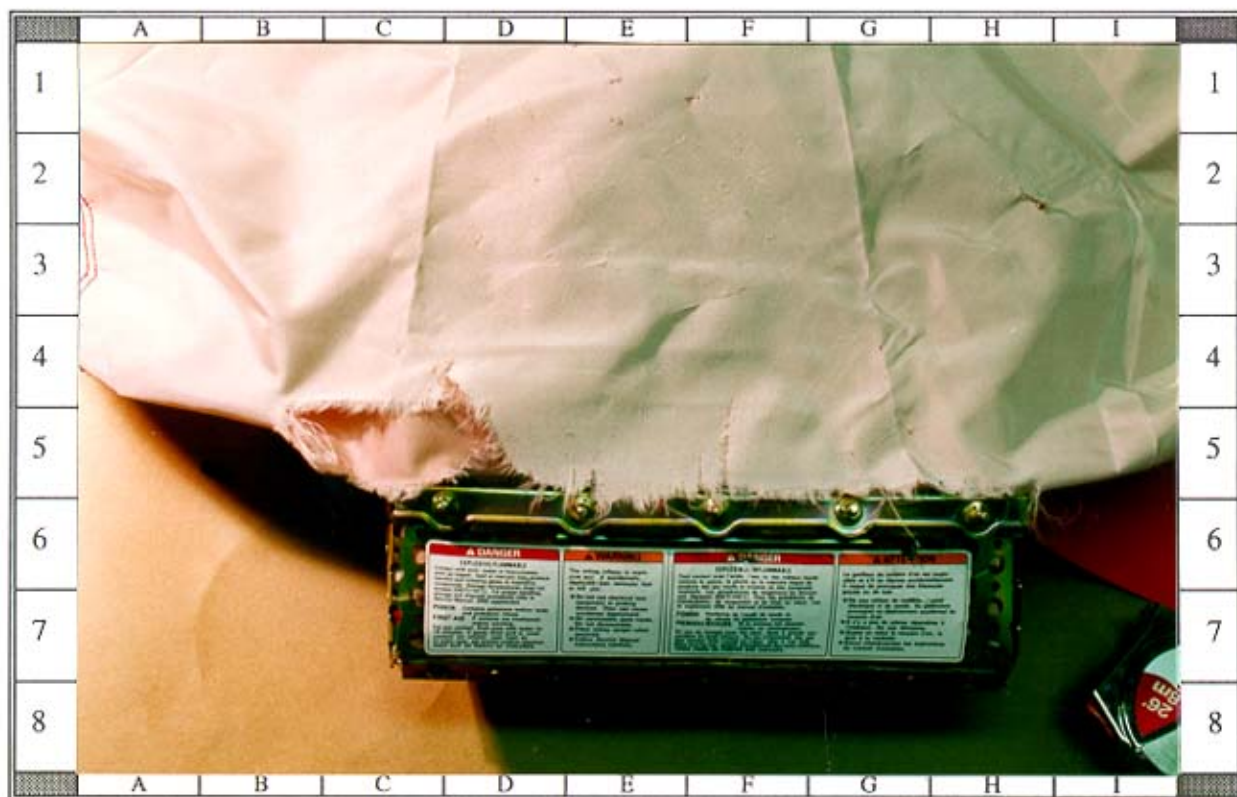
52 -- Close-up of fibers from Case Vehicle's torn right front air bag showing singeing



53 -- Microscopic close-up of mushroomed (singled) fibers from Case Vehicle's torn right front air bag



54 -- Closer microscopic view of mushroomed (singled) fiber ends from Case Vehicle's torn right front air bag



55 -- Case Vehicle's torn right front air bag shown next to the inflator; inflator module mounting screws caused tear



56 -- Case Vehicle's torn right front air bag showing that the tear marks originated from the screws on inflator module



57 -- Case Vehicle's torn right front air bag showing that the origins of the tear occurred along the folding pattern lines



58 -- Case Vehicle's right front air bag viewed from top; NOTE: no evidence of contact to top cover flap and no cuts or tears



59 -- Case Vehicle's right front air bag showing 9 centimeter (3.5 inch) vent holes



60 -- Case Vehicle's removed right front air bag inflator components



61 -- Vehicle #2's undamaged front and damaged left side viewed from approximately 30 degrees left of front



62 -- Vehicle #2's damaged left side with stringline present viewed from approximately 45 degrees left of front



63 -- Direct damage to Vehicle #2's left front wheel rim ("N" and "P") and fender ("H") begins 17 centimeters (6.7 inches) behind axle



64 -- Close-up of Vehicle #2's direct damage to left front wheel rim; NOTE: scraping to rim between "P" and "N"



65 -- Vehicle #2's damaged left side; NOTE: direct damage goes from left front wheel rim ("P" and "N") rearward to B-pillar ("E" and "L")



66 -- Close-up of Vehicle #2's area of maximum crush @ C₄ (see cells G5--G6); NOTE: tape on stringline represents location of crush measurements



67 -- Vehicle #2's damaged left side viewed from approximately 60 degrees left of back; NOTE: marker "N" @ left rear door shows spurious damage area



68 -- Close-up of Vehicle #2's spurious damage to left rear door area, possibly occurring in salvage yard



69 -- Vehicle #2's damaged left side viewed from approximately 45 degrees left of back



70 -- Reference line view of Vehicle #2's damaged left side from back showing crush profile



71 -- Reference line view of Vehicle #2's damaged left side from front showing crush profile



72 -- Vehicle #2's undamaged back and right side viewed from approximately 60 degrees right of back; NOTE: back parts removed for salvage



73 -- Vehicle #2's undamaged right and front viewed from approximately 45 degrees right of front



74 -- Vehicle #2's driver seating area, instrument panel, and dash view from outside driver window; NOTE: intrusion to driver's dash (see cells A3--B4)



75 -- Close-up of Vehicle #2's driver seating area showing lack of contact evidence;
NOTE: lower door panel intrusion



76 -- Vehicle #2's driver and right front passenger seating area viewed from outside
right front door



77 -- Vehicle #2's rear passenger seating area viewed from outside right rear door;
NOTE: intrusion to left lower B-pillar and door panel



78 -- Close-up of Vehicle #2's left rear passenger door intrusion and deformed arm rest on door



79 -- Close-up of intrusion to Vehicle #2's left B-pillar



80 -- Close-up view of intrusion to Vehicle #2's driver door panel, left dash, and left kick panel